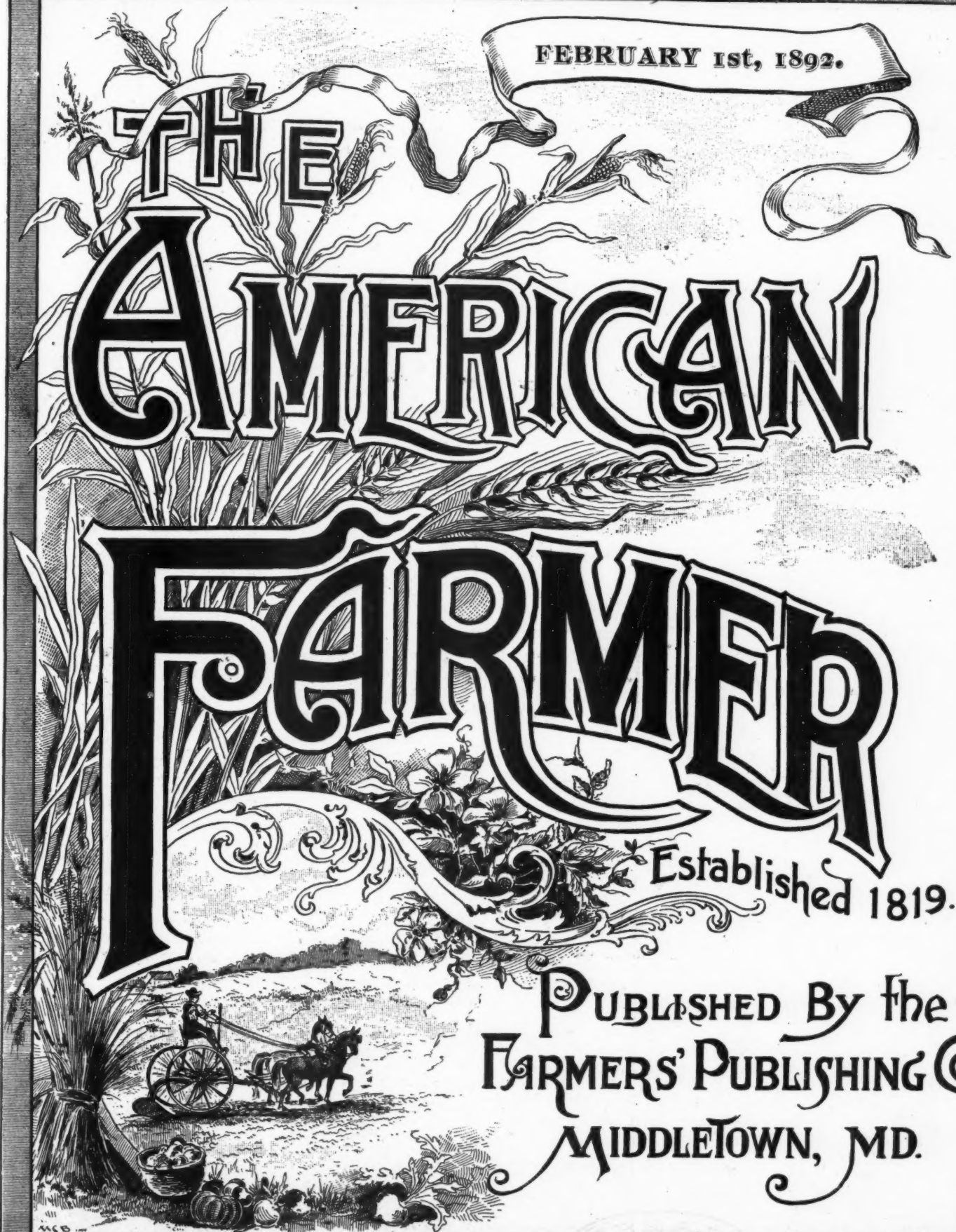


13
FEBRUARY 1st, 1892.

THE AMERICAN FARMER

Established 1819.

PUBLISHED By the
FARMERS' PUBLISHING CO.
MIDDLETOWN, MD.



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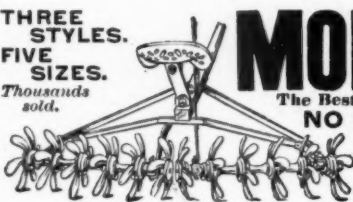


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THE AMERICAN FARMER.

DEVOTED TO AGRICULTURAL, HORTICULTURAL AND RURAL LIFE.

ESTABLISHED 1819.

MIDDLETOWN, MD., FEBRUARY 1, 1892.

ELEVENTH SERIES.

VOL. 1.—No. 3.

The American Farmer.

"O PORTUNATOS NIMIUM SUA SI BONA NORINT
AGRICOLAS." — Virg.

Published Semi-Monthly by the

Farmers' Publishing Company,
MIDDLETOWN, MD.

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ing to parties advertising in this paper, if
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ment in THE AMERICAN FARMER. This is
little trouble and costs nothing, but it helps
us and is information wanted by the adver-
tiser.

EDITORIAL.

WORK FOR FEBRUARY.

In many portions of our country
where our Journal circulates, farm-
ers are looking towards Spring
work. We call attention to duties
that should now be taken up.

MANURING.

When the weather favors manu-
ring can be profitably done at this
season, hauling directly from sta-
bles and yards, spreading regularly
over the frozen ground, or at any
time when you can enter the field
without poaching. When soft days
come much can be done in the way
of scraping together all materials
for the compost heap, thus saving
much soil food that will otherwise
be entirely wasted. Give this mat-
ter attention and by gathering up
all stuff around the buildings
where the stock sometimes walk,
which you may think mud only,
will prove its worth when hauled
on the field. Ashes, chip-dirt,
chicken-droppings and even house
sweepings contain much soil food,
and will pay largely for the small
labor of gathering, hauling and
scattering on the field.

CLOVER SEED.

The old plan of sowing clover
seed upon the snow has some ad-
vantages. If snow is timely and
not too deep, you can sow the seed
regularly, guided by your foot-
prints, and the melting will wash
the seeds into the crevices of the
earth, which close up when the
frost rises, leaving the seeds well
covered. If no snow comes, better
defer sowing till the ground is free
of frost. Sow without stint not
less than 4 or 5 qts. per acre, and if
seed be cheap and plentiful give
two sowings. Lime should follow
for all grasses do well, and are al-
most a certainty when properly
dressed with it.

ORCHARD GRASS.

We think where a lasting sward
is desired, this grass is very supe-
rior. Take one bushel of this seed,
mix with it one peck of cloverseed;
sow this on one acre, and, if the
season favors, you will get a fine
set, provided the ground be limed.

CORN GROUND.

Just as soon as the stiff soil be-
comes sufficiently dry, start the
plow, getting down pretty well
and follow with a dressing of 25 or
30 bushels of lime per acre; lighter
soils should be plowed later.

OATS.

The ground for oats should now
be put in readiness for the first fa-
vorable day for sowing. Early
oats generally gives good returns,
but don't forget that poor ground
and big oats are never found to-
gether. Dress with lime and ma-
nure, too, if you have it.

TOBACCO BEDS.

If not already done, the beds
should now be prepared, we think,
in the manner recommended in our
last issue. Early plants are gen-
erally the surer, but a good plan is
to have several small beds prepared
to be sown a little later in case of
failure of first sowing. Always
endeavor to select a warm or pro-
tected location.

PASTURES.

Your pasture field can now be
dressed with light fertilizers of any

kind, followed by a very light har-
rowing, if the ground is not too
soft.

WHEAT FIELDS.

Keep the stock off now and see
that the surface drains are kept
open.

LIVE STOCK.

The best attention should now
be given to stock of all kinds,
shelter well, keep clean and feed
liberally. Your work animals
should now be stimulated for
spring work. It always pays to
keep stock in good condition.

FARMING IMPLEMENTS.

Have your implements ready
when needed, for this fickle cli-
mate of ours demands us to make
use of all good days for out-door
work. Be vigilant and ready to
push your work or your work will
push you.

ORCHARDS AND GRAPES.

If you think of setting out an
orchard; plow your ground, mark
it off and dig the tree beds. The
beds should be exposed for some
time before planting. Be careful
in selecting your trees. The coun-
try is swarming with tree swin-
dlers. If you have reliable nur-
serymen near home, patronize
them.

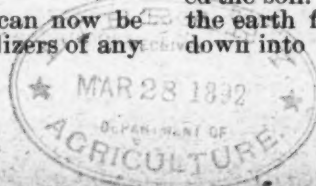
Give your grapes their spring
trimming the first warm day. Re-
move the sod from the roots of
your vines and give a light dress-
ing of horse manure, then cover
with a thin coat of fine soil.

FENCING.

If you have not supplied yourself
with fence posts, rails, &c., now is
a good time to cut, split, hew and
haul. Firewood, too, should now
be cut and got together for the
entire year.

LOOSEN AND PULVERIZE THE SOIL.

If we consider the distance to
which the roots of many vegetables
extend where the soil is open to
receive them, we can see the im-
portance of loosening and pulveriz-
ed the soil. It is well known that
the earth from its gravity settles
down into a compact and impene-



trate mass. In this condition the roots are prevented from collecting food, having no free passage in the earth. They can push out but little from the main stem, cannot stroll at will in search of nutriment in this pent-up condition. Plants are voracious feeders if given free range and if we trace roots to the boundary of their range, we fill with astonishment at the extent they travel and the numerous obstacles they surmount. It has been ascertained that a grain of wheat planted in a mellow soil will send roots downwards three feet, and much farther horizontally. The roots of oats and some other grains have been discovered eighteen inches or more from the stem.

If we look in our garden, we find the greatest length of roots, from the fact that our garden is worked up better than our fields. And we also find the garden giving better results in proportion. We have noticed how the potato will push out leaders or seekers in a sandy loam, when well stirred. Now these facts lead to the conclusion that the cultivator should prepare his soil in such manner as to allow of the greatest extension of the roots,—should pierce deeply and pulverize well. We are aware that many persons offer objections to deep plowing, and give reasons that, seem valid, but we urge that if you plow five or six inches deep the roots cannot go lower than the plow-share went, and if sod is merely turned over, the roots of plants will be more or less resisted by this net-work of sod roots. In cloddy ground also we can see that the plants can get no nourishment from these hard lumps, however full of plant food, for the roots cannot penetrate them. Plow deeply, pulverize well and thus give the feeding fibres their full show to perform their functions properly.

THE RECENT STATE FARMER'S CONVENTION.

More than a hundred representative farmers of the different counties of Maryland assembled in Baltimore last month, for the purpose of devising means of relief to the depressed condition of agriculture, and for discussing matters pertaining to general farming interests.

President Stake opened the convention in a speech of much power, showing the past and present condition of agriculture and gave much time to the matter of taxation. His address covered every point of

interest to the farmer and was well received.

Papers were submitted concerning different subjects and a number of opportune speeches were made upon roads, taxes, compulsory education &c. Reassessment of property was nearly unanimously favored, and the listing system was voted to be the best as yet tried by many other states, and the present Legislature will be informed of this resolution, by a committee appointed for the purpose.

By request of several delegates Judge Stake explained the listing plan which is as follows: "Each citizen of the State is required to make application to the County Commissioners every year for an official blank." "This the applicant fills up, giving his real and personal property and its estimated value. This done under oath and each taxpayer is his own assessor. If false returns are suspected the County Commissioners can make any suspected person testify and prosecute for perjury, any one found making false returns. It is thought this plan will reach much property heretofore untaxed. The sessions were well attended and much interest marked the proceedings. A large committee composed of prominent agriculturists, was appointed to co-operate with a committee from the Maryland State Grange to present matters to the present Legislature. We hope much good will result from the meeting and that all the interests of our farming industry will be benefitted.

Judge Stake and Wm. B. Sands were re-elected without opposition, to the office of president and secretary, respectively.

"SEE 'EM LATER."

We deem it our duty to call the attention of our readers to the oft repeated warnings against dealing with strangers. It is well-known that many tricksters are always on the lookout for the farmer's fleece, and notwithstanding many notices and frequent warnings published again and again, by all reputable journals, these "fellows of the queer," still find victims and "get in their work" to the great discomfort of the unwary. These "sharps" study hard, work night and day to perfect their schemes and thus manage to get their business down to great fineness of finish. They are very generally brainy men with pleasing address and persuasive eloquence; have their mouths filled

with arguments, so that the ordinary or average rustic is in danger, unless he has the courage to say, when approached, "Sir, I'm engaged at present and am not prepared to say at what time or place, I will be able to meet you, but till then you must look up some other 'greeny' or you will not do much business in these parts." That will prove a sure shot and he'll easily conclude that he has struck the wrong man. If you stop to argue or invite him to dine or lodge with you, the chances are that you'll be convinced that he is "straight" and has the very thing you need. We frequently hear of men signing papers and getting into much trouble. Now we tell you, what we know, that fully nine tenths of these agents, peddlers &c. are arrant knaves and impostors and we give more space and time to this subject than is usually given to notices of this sort because we want honest men protected and thieves punished. Farmers, consider that you need nothing which you cannot procure near home of men you know and you have no excuse to plead when you get taken in by a stranger, unless it be the much used one, which should shame you; "getting a big something for a little nothing." If your cupidity leads you to this course, "serves you right" is the pity we offer for your distress.

We offer these hints for all but more especially for farmers, for this class is generally looked after early and often by "sharps" supposing of course the farmer has money about him or can easily command it when needed. Look out for them when spring opens, call for the "previous question" which cuts off debate and you will not be fleeced.

If iron ore or iron cinders from the blacksmith shop be placed around the roots of fruit trees, the borer that deposits the eggs which produce worms will be driven away from his winter quarters.

For every 1,000 lbs. of "Indian corn" sold from the farm the land is robbed of 9½ lbs. of plant food for crops.

One spoonful of grated horse radish put into a pan of milk, will keep it sweet for several days in the open air or cellar.

Conjugal love is not preserved in family jars.

Agriculture.

EXPERIENCES IN FALL AND SPRING PLOWING.

BY T. R. CRANE, VIRGINIA.

The ever welcome American Farmer in new dress, and from new hands has, just reached me. I sincerely wish the returning editor and proprietor a long, prosperous and happy life in any enterprise upon which he may enter, and that he may reach the good ripe age of his much lamented father before he shall be called hence, to receive the reward of the diligent. I knew the Senior for many years, as the proprietor and editor of the American Farmer previous to his son becoming associated with him in its publication. I always found him willing and anxious to do all that lay in his power to assist both by advice and influence, and to advance the farmers' interest whenever possible for him to do so. And, as the editor of the only agricultural journal published in the state for many years, his influence with the farmer was very great, and we who survive him can truly say "His works do follow him," for he did much to advance the cause of agriculture in many ways. Your 'Salutatory,' and present issue—January 1, 1892, give the old friends of The Farmer reason to believe that it has fallen into most excellent hands and I, for one, wish you every success in your efforts as successor in the publication of this old friend and valuable auxiliary to the farmers of Maryland, as well as those of every other state where its teachings have been followed.

Availing myself of your invitation to the old friends of The American Farmer to continue their relationship as friends and contributors as well as subscribers with the new organization, I herewith give you my experience respecting fall and winter plowing for corn, and I say don't do it if you wish to make a crop equal to the capacity of the land, whether the land is in sod or not, or whether it is heavy or light soil. Now for facts. I purchased the "Cowpens farm" in lime kiln bottom near Towson, Baltimore County, Maryland, in 1854. I put out a field of thirty three acres to Thomas Crawley that fall to plant and cultivate in corn the following Spring. Mr. Crawley plowed about one fourth of the field in the fall previous to freezing weather, the

balance of the field was plowed in the spring after the sun had sufficient power to warm the sod. All of this field was cultivated in exactly the same manner. And was of uniform fertility. The crop produced was 400 measured bbls. (2000 bus.) of good corn, but the yield was perceptibly less upon the land that had been plowed in the fall, fully one third less. That was my first experience. A period of thirty six years brings me to my second experience in fall plowing which was upon my farm Mantua in Virginia. In the fall of 1890 I plowed a portion of a 50 acre field, it was a heavy timothy and clover sod. Last Spring this piece of field was put in the best possible mechanical condition for planting, and the corn planted, and a good stand apparently procured. I found its growth to be very slow, and when too late for replanting I realized that a species of worm, called in our locality "bud worm," had eaten the heart entirely out of the stalk. The crop was a failure, on land that was fertile enough with proper Cultivation to have produced ten bbls. (50 bus.) of corn per acre. My neighbor plowed a field in the fall of 1890, and his crop of corn was nearly a failure. Now this in comparison with spring plowing. I had sixty acres plowed last spring after the sun had been shedding his heat upon the surface sod sufficiently to start the young grass growing vigorously. This sod was thoroughly inverted, the land put in the best condition for planting as promptly as possible, and the corn planted. The corn came up promptly, was well cultivated, the cultivation being shallow and level, and repeated often enough to prevent a crust from forming upon the surface, until the corn began to tassel.

The result in this instance was nearly 700 bbls. of corn from the 60 acres, and upon land no better than that which was plowed in the fall, and where the crop was a failure.

What is essential in the production of corn is heat, fertility, moisture, and clean shallow cultivation from 2 to 3 inches deep according to the texture of the soil. Land plowed in the fall or winter unless it should freeze hard immediately following the plowing, is likely to settle too solidly from the frequent fall rains to cause the frost to have the beneficial effect claimed for it by the advocates of fall plowing. Then again the insects are not destroyed by this turning the sod

down, as the sod does not decay to the extent of entire decomposition while winter, or cold weather continues, and the worms and insects have all the food necessary to perpetuate their existence until after the heat of the sun has penetrated and caused the decomposition of the vegetable matter which was turned down. By this time the corn has been planted, and has started to grow, but because of the cold, clammy sub seed bed not being best suited to its growth, it grows but slowly and becomes the prey of these voracious gourmands, as there is nothing else for them to feed upon, provided the land has been properly prepared previous to planting the corn. By turning the sod in the spring after the heat has started the grass to grow, and immediately putting the land in order, planting the crop promptly, and rolling to insure prompt germination and quick growth, then following with proper cultivation so as to give all the strength of the soil in its best form to the plant, and attract and hold the fertility from the atmosphere, and heat from the sun. It will be found that owing to the uniform congenial temperature of the entire seed bed which is so essential to the healthy growth of corn, that the corn will grow out of the reach of the usual depredators before the food contained in the sod so recently turned down has become decomposed.

This from my experience is the most certain way to make a crop of corn. If any of your readers have a better and surer plan I would be very much obliged to them if they will kindly let us hear through your Journal what their plan may be. Let us do what we may towards helping each other.

—o—

"Land Owner" Leonardtown, Md., writes us as follows "The great National issue is not free silver but how can the land be used by the people that all may receive the greatest benefits. They should have land enough to cultivate, without hindrance, but only what they can cultivate well, and for their immediate sustenance. They should pay the state for the use of it and no one else to receive anything from the farmer's toil; but must vacate when they cease to farm the land.

"When a young man marries, he should not have to spend his best days in trying to pay for land, but should use his earning in rearing and educating his family. By the time a man pays his enormous tax-bills and keeps up the repairs, he

may find himself in debt, and his property greatly depreciated in value. "The tenant cannot always know when he must quit and if he improves the land, other persons may offer more rent and he loses his place and much labor goes for nothing. Now it is clear that the man who owns his farm can make a living if he manages well, but the renter cannot do so well, for no farmer can clear one third of his crops and no one can rent land on better terms at present. "Hard times are not brought about by low prices for what we sell or by high prices for what we must buy. It is perhaps that too many are living upon the labor of the few. It is perhaps the great land problem which all are trying to solve. "We see but one alternative if we really want to settle this matter so as to give all a chance and not grind our neighbor down to a mere pittance for life. Our system is at fault. No man must be allowed to control more land than he can use. This plan established, all will have enough to do, and happiness and plenty will be found in our homes."

[As we understand it our Writer means that all the lands should be held by the State for the purpose of selling or renting to persons who who are willing to properly cultivate them, but that no one person shall have more than absolutely necessary for the support of his family thus giving all who desire work of the kind, opportunities to live.

It implies also that we must have much smaller tracts—means intensive farming and of course contemplates the overthrow of land monopolists.

Although rather in keeping with the Henry George theory, we publish it for the discussion that may follow. ED.]

For the American Farmer.

AGRICULTURE EDUCATION.

BY X. MARYLAND.

The addition of the study of the apparatus and methods of Weather Bureau Work, and the system of weather prognostication" to the course in the Johns Hopkins University and its equipping Prof. Milton Whitney of the Maryland Agricultural College with "suitable apparatus," and setting apart a portion of Clifton, the country seat of its founder, to enable him to "pursue his investigation upon the temperature and moisture of soils" commenced by him in South Carolina, notices of which may be

found in Experiment Station Record Vol. 1 No. 6 for 1890, marks a keen appreciation of the needs, not only of Maryland farmers, but of every one who may plant or sow a crop of any kind, set out a tree or use a spadeful of manure of any kind. Prof. Hilgard of California thus tersely states the need of such instruction: "Moreover, the possession of an accurate description of the agricultural features and peculiarities of a state is an indispensable prerequisite to the giving of truly practical instruction to the youth of the States in the courses at the agricultural colleges. Nothing can be more obvious than that they should be truly taught not only what they should have to do in certain hypothetical cases, but also what are the circumstances and difficulties with which, in actual fact and practice, they will have to deal in their own state."

And again he says: It is difficult to see why what is done by geological surveys for the miner should not be equally, at least, done for the farmer by properly conducted agricultural surveys. The agricultural expert should have all the knowledge possessed by the good "old farmer," but a great deal more in addition by using all the lights that modern science can throw upon the subject."

Those who have seen Ferrel's Meteorology, Abbe's Storm Predictions, Storer's Agriculture of these modern days will see the need of a higher training of the mind to grasp the truths that lay at the bottom of successful farming at the least cost. Evidently a soil that has forty inches rainfall needs different cultivation from one of twenty, and should the crop temperature months of the one be 70° and the other 50°, different kinds of crops and manures would be demanded. Thus ashes would stiffen sands but would injure stiff, hard clays. Peaches thrive best in sands; pears on clays, and although they will grow in both soils, yet they do not attain the thriftiness and yield when changed from their natural soil. It is the part of science to lighten labor, to give precision and certainty to methods of labor and research. And the higher the reputation of the schools in which this kind of education and training is given the higher the standing of those who may have to put it into practice.

Mental and physical labor should go hand in hand, and our best institutions like Harvard, Yale, and Princeton, with the gymnasias, foot ball, base ball, rowing, and

athletic clubs, encouraged by their very able and scientific faculties, are fast breaking down the former supposed social barrier that stood between the two.

Hence we see and argue a brighter day socially mentally, physically, and financially for these farmers, who in cold and heat, in rain and sun-shine, cultivate the soil and feed the world. We honor Fulton and Edison, Henry and Huxley, toilers all in the shop and the laboratory. We should not ignore Mecchi and Villi, Liebig and Wagner who looked for rewards from the soil.

Elective studies are growing into favor very rapidly in our best colleges, and the mingling of the students in consequence gives rise to recognition mutual respect, and that stronger tie that comes from having a common alma mater. As storm in cities seeks to place the largest and most varied assortment of articles under one roof, so are our colleges seeking to give the widest possible education to fit pupils for every pursuit in life.

A man on a hill sees farther than he in a valley, while those on mountains and in balloons are still more.

Chemists have hitherto delved for the physician, the miner, and the mechanic. They now must study nature in the plant, the soil, and the atmosphere, and must grapple subjects worthy of their very highest efforts.

—O—

For the American Farmer.

CORN GROWING.

BY "JOHNNY CAKE," MD.

THE AMERICAN FARMER has made us a visit in a brand new yellow coat, containing a great variety of good things; from North Carolina it has a real fruit cake, rich and spicy.

Some of the old readers may like a Johnny Cake occasionally, and if the caterer is disposed to serve it, we will send some when we think we have a good baking, but he will have to be the judge, for a Sally Lunn, or a Johnny Cake, must be done to a turn to be palatable and digestible. The first thing to be considered is how to grow a good crop of corn; after securing the corn the manipulating is a small matter. Before and after Horace Greeley told what he knew about farming, a great many who know it all, have been telling how it ought to be done. Some may put too much theory with too little practice, but any one that grew up in a city and wants to be

a farmer, if a careful reader, can find all he wants to know. The average farmer is not inclined to put his light under a bushel, but rather likes to tell how he can grow bigger crops than his neighbors. Taking the corn crop of Maryland, the record of the highest yield is one bushel to the 1,000 hills. Under more favorable circumstances, 18 barrels or 90 bushels of shelled corn is said to have been measured from one acre. Chemists say they can make a mixture that will grow corn on the washed sand of the seashore (but it has not been known to grow there to any extent.) When the farmer buys this mixture, his share of the profits is small—his pay is in handling the crop, while the chemist handles the money—and having had enough of that experience, he wants a change and is going to make it by being his own chemist, and thinks he can make it without going through a regular course of chemistry. The following formula is one of many he knows to be reliable.

Take all the waste vegetable matter on the farm, with the stable manure from all the stock,—have it thoroughly rotted, covering with ground plaster, after working in fine condition and mixing five bushels of unleached wood ashes to the cart load—then add silica or sand,—there will be no necessity for marking the analysis on the bags, for you will know what is in them, and it will show for itself in the crops. You will have a fertilizer at a cost of from \$3 to \$5 per ton, equal to a commercial article (if not better) at a cost of \$25 per ton, having \$20 to be applied to a sinking fund under your own control.

Now for theory. It has been found by digging down beside a hill of corn and washing away the dirt, that the roots go down three and four feet—often four feet, and the above farming fertilizer—dropped in the hill, will give the young plant strength to penetrate the sub-soil and send up a sprout, the size of a pipe-stem, that when grown, will insure a good crop, “provided,” as the old darkey said, “if me and Massa do our part and de good Lawd does hisen.”

—o—

THE English farmer grows turnips for sheep and feeds them on the ground, the sheep eating the turnips without the necessity of the farmer harvesting the crop by hand. No labor is required in feeding the turnips, and the sheep improve the soil.

For the American Farmer.

GRASSES.

BY N. MARYLAND.

Our Experiment Station director, Maj. Alvord, at the Washington Meeting of the “Association of American Agricultural College and Experiment Station” gave the following list of grasses as suitable for pastures in Maryland.

Kentucky blue grass,
Orchard grass,
Bell top,
Fescues,
Hay,
Tall Fescue,
Red Top,
Timothy,
Orchard grass.

Without discussing the value of the selection we give from the North Carolina Experiment Station Bulletin No. 73 the amount of Nitrogen Phosphoric Acid and Potash contained in a ton of air dried hay containing 14 to 14.3 per cent of water, of these several grasses so that those disposed to grow them can see what manures they will require. We, also, give another table showing the kind of soil where they do best.

	Nitrogen.	Ph. Acid.	Potash.
Kentucky blue grass,	28.2	10.84	35.86
Orchard grass,	36.6	5.4	33.6
Red top,	21.18	6.9	22.8
Timothy,	18.6	6.66	24.0
Tall Fescue,	24.8	11.9	51.2
Hard “	23.4	7.6	21.5
Red “	15.8	18.0	23.0
Sheep’s “	23.4	7.6	21.5
Kentucky blue grass... Dry stiff calcareous clay.			
Orchard grass... Rich moist rather heavy clay soil.			
Red Top..... Grows everywhere.			
Timothy..... Moist heavy soil.			
Tall Fescue..... Red clay soils, Moist loams.			
Creeping “..... Poor soils.			
Hard “..... Light loams.			
Red “..... Dry clay, loams.			
Sheep’s “..... Poor red clay.			

As will be seen none of these grasses promise will on light sandy soils where a sod is so badly needed to prevent blowing, evaporation, and the sun’s action.

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A SUBSCRIBER from Matthews C. H., Va., writes us to know “if sweet potatoes fed to horses will injure them or possibly kill them.” [Our reply is that potatoes, (Sweet or Irish), turnips, beets, apples and other fruits, that stock seem to relish are good for them, but should not be fed exclusively on such diet. We do not think any of the above mentioned, vegetables would kill stock of any kind unless given in enormous quantities. Ed.]

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Subscribe for THE AMERICAN FARMER.

GROWING CLOVER.

Great Difference in the Manner of Seeding and Managing.

There is no question among farmers who have tried it as to the value of clover on the farm, but there is considerable difference in the manner of seeding and managing. There is no question but that differences in soil and locality have much to do with this difference, as what is best in one locality will not always be best in another.

So sow on winter wheat, sowing the seed in February, the exact date being largely determined by the season. Whenever it can be done it is best to sow reasonably early. Others claim that the best results are obtained by sowing with oats. Take the first opportunity in the spring for doing the work, as earliness is quite an item with both clover and oats. Others sow the clover alone about the time of the last snow, say about the last week in February. These claim that when the clover is sown with small grain after the crop is harvested with plants, being so suddenly exposed to the hot sun after being sheltered all through their growth previously, are killed out.

Some plow under early in the fall where a good stage of growth has been secured, claiming that there is a large amount of valuable plant food in the clover which, if plowed under when grass, will be returned to the soil. Others either let the clover die down in the fall or cut it down with a mower and let it lie until spring, when it is plowed under. Those following this plan claim that keeping the soil shaded aids in storing fertility, and hence the advantage in letting the clover lie on the ground until spring, and then plow under and either plant to corn or potatoes, and then sow to wheat again in the fall, making a three years’ rotation; or by having oats follow the corn or potatoes and then wheat and back again to clover, making a four years’ rotation. Others plow under the second growth in the fall and sow to wheat.

In a locality where the oats can be sown early, usually not later than the last week in February, sowing clover with the oats will nearly always give good results, but when the seeding must be delayed until March because the soil cannot be suitably prepared before, it will be best to sow alone or on the winter wheat in order to get the work done early. But the manner of sowing is not so important, provided it is done in a way

that will secure a good growth, as it is to be sure and sow more or less every year. Clover aids to build up the fertility by mulching the soil. Shading the soil aids in the process of restoring nitrogen, and a good growth of clover will shade the soil completely. The roots extend deep into the subsoil and bring up more or less fertility to the surface, and in this way the surface soil is enriched. Clover is a gross feeder and derives some of its substance from the air, and in this way adds to the fertility. The first crop may be cut for hay, be fed out to stock and the manure hauled out and applied to the soil, and the second crop be plowed under to add to the fertility. It is not best to depend upon clever alone to keep up the fertility, but it is a very important item, and on the majority of farms, especially in the West, there is not so much sown as there should be—*St. Louis Republican*.

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COST OF FENCING.

A correspondent in Bowling Green, Warren county Courier says:

"The pioneer fence of the country, as we all know, is the worm fence, requiring no tools for its manufacture but the axe, maul and wedge. While timber was abundant and it was necessary to remove it from the land in order to cultivate it, this fence was the most available and cheapest, if it did occupy five feet in width and encourage the growth of a blackberry hedge increasing the width to ten feet. The growing scarcity of timber and the increasing value of land has rendered this fence almost obsolete except in the 'back' country.

"The next timber fence, is one made of posts and boards, the posts eight feet apart and the boards sixteen feet long by six inches in width, usually five boards high, taking into consideration its capacity to turn all kinds of stock when properly built, its durability, if made of cedar posts and good head poplar boards, its sightliness and economy of space, it is perhaps the best fence in general use. With a barbed wire six inches above the top board, it is a fence with fewer objections than any with which the writer is acquainted though not the cheapest. Here are the figures to fence a hundred acres. It takes 2,800 yards of fence to enclose one hundred acres of land lying in the most favorable shape possible, a square, varying from that to more than 14,000 yards if

the farm is one hundred acres long and one acre wide. Take the lowest estimate 2,800 yards to 100 acres in a square. It will take 1,050 panels of boards and posts eight feet to the panel to simply inclose it, without cross fences. Average cedar posts can be bought for 20 cents each. Good poplar boards for \$1.25 per hundred feet. A fence five planks high, eight feet to the panel will cost, labor and material 55 cents per panel, or \$578 for the outside fence. Two division fences, cutting the farm into four twenty five acre fields will cost half as much more, or \$289. Yard and necessary lots fully half of the last sum, or \$145. Here we have \$1012 on one hundred acres of land and not a plank but what is absolutely necessary on any well arranged farm, leaving out of the account a dozen or more gates, indispensable for proper ingress and egress about the premises. I give these figures simply to show that I am not much "off" when speaking of farm fencing as a heavy tax on the farmer.

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A POINT FOR YOUNG FARMERS.

Here is a suggestion from the Germantown Telegraph: A young man who wishes to become a scientific farmer should work on a farm until he is eighteen or twenty. Let him learn the routine work on a farm, how to plow, sow, or plant, cultivate, harvest, and dispose of the crop. He will get very few ideas of why and how crops grow, or what influences growth of stock, but he will learn what few professors ever learn, and therefore cannot teach. The science of farming is divided into two parts; one is how to do things, the other is why do I do them. Any lubber can learn the first, but there must be intellect to compass the other. After he becomes expert at all the manual duties he will have nothing to interfere with the influx of ideas as to the why. He will grow to be more than twice the man he was.

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THE Nebraska Farmer relates an instance where a farmer bet he could raise more wheat on an acre from half a bushel of seed than the other could from three bushels of seed. The three bushels were sown in the ordinary way, the season was favorable, and the yield was forty-three bushels to the acre. The other man prepared a splendid seed-bed and realized forty-seven bushels from his half-bushel of seed.

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MACHINERY AND INDUSTRIAL LIFE.

Industrial life of today compared to what it was twenty-five years ago can but excite surprise and wonder. The introduction of labor saving machinery has, within this short time, wrought an almost complete revolution in all the activities belonging to production and transportation; and on every hand—in the country as well as in the city—machinery is found seconding, or altogether supplanting physical toil and making it possible to accomplish in a few hours what formerly would have required days and weeks of labor.

In the professions the impress of the revolution is perhaps less noted than in other vocations, but even here the laborious work of the pen has almost been superseded by the little typewriter that merrily clicks off folios of manuscript. If copies of the neatly printed pages are desired, it is, with the aid of the letterpress, but the work of a few moments, or if duplicates are required, the hectograph is at hand to make any number of copies. An "adding machine" handles figures as if by magic.

Indirectly, machinery has made the acquisition of knowledge an ease and pleasure in producing a wealth of cheap books, embracing every conceivable subject so arranged as to admit of ready reference, thus saving weary hours of research and enabling the intellectual toiler to accomplish in hours what formerly necessitated days.

—St. Louis Republic.

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THE best results with manure is fine and evenly spread. The cost of all manures depends on the labor bestowed upon it, and the finer the manure the less labor will be necessary to haul and spread it.

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A remedy for bee stings frequently given, consists in cutting an onion in two and applying the cut surface to the part stung.

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LARGE seeds are better than small, for the reason that they furnish a much larger amount of nutriment to the young plant.

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FINE earth is a good mulch for corn, and is most economically supplied by a frequent stirring of the soil with a cultivator.

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SOILS which are well underdrained and have been plowed deep will stand a drought better than if not in that condition.

Horticulture.

For the American Farmer.

Winter Notes for Fruit and Truck Growers.

By R. S. COLE, MARYLAND.

While winter is a time of comparative leisure as far as the growth of the garden and fruit crops are concerned, it does not follow that the grower has any more spare time at his command than he needs for necessary recuperation from the exhausting labors attending the growing, harvesting, and marketing of his crops. The old adage of "eternal vigilance as the price of success," applies as forcibly to the fruit grower and trucker, as to any occupation under the sun.

One of the main objects to be sought during the winter months is to accumulate and care for as much manure compost, and different fertilizing material as possible; without an abundance of which he would be like a bank without capital. Much depends upon the manner in which manure is cared for after purchasing or making, as to its value, in a double sense, when ready for application, for if care is not used its value when applied may be much less than when first secured. One of the chief sources of this loss, or deterioration, is "fire fanging," which is almost sure to occur when it is left carelessly in heaps in field or barnyard. The practice most in vogue in this locality, is to pile in heaps about the fields whenever it is to be applied in hill or drill, in the spring following. Nothing seems so effective in preventing loss of value as frequent turnings whenever the heap shows heat, and the addition of scrapings from fence corners, street dirt or muck. The heating of manure is necessary in a moderate degree to bring it into the best possible condition for applying to crops; such manure gives better results than fresh, coarse or green manure when applied to hill or drill. If the strawberry beds have not had a covering of coarse stable manure no time should be lost in doing it, as the time has passed for profitable growing of this berry without manure of some kind. The time was in years gone by when it seemed to require less care than at the present day, and to manure a berry patch was then unheard of, but he fails to keep up with the procession nowadays who neglects this important item. It is a good time now

to take out the old dead wood from raspberry or blackberry patches, as they break off much easier when the ground is frozen, and should be raked off in time for early cultivation in spring, before grass starts, and the work is made three-fold harder. I have had good success to follow from winter pruning of both blackberries and raspberries, in fact I believe it diminishes the danger of winter-killing of the laterals in a great degree; as the more top the roots have to support, the less able they are to do so. Both those crops are rank feeders and a shovelful of well rotted manure scattered around their roots will be amply repaid in next season's yield.

If you have young trees around which, has been left grass, weeds or filth of any kind, see that it is removed against a heavy snow comes, when the mice do so much damage by gnawing off the bark at the top of the ground. Where this has been neglected until too late, trampling of the snow around the trunk of the tree will often prevent the trouble.

TREES NEAR THE HOUSE.

A reliable authority on matters relating to the aspect and surroundings of a house considers that no single tree should stand within some feet of it, no garden within several yards and no woodland, with its carpet of decaying leaves, within at least half a mile. This last estimate might well, it is thought, be reduced by one-half, and perhaps twelve to fifteen feet might be taken as the smallest distance which should intervene between tree and house. With this qualification the proximity of trees to a dwelling house is distinctly beneficial. To insure a pure and fragrant atmosphere, "you must," says a writer on the subject, "accept from nature those tall, green chimneys called trees, which imbibe and carry aloft into the air those hurtful gases which, if admitted to the lungs and brain, might disease the former and obstruct the delicate movements of the latter."

At various points in the country may be observed houses which, in spite of faulty situation, are yet generally healthy, chiefly because they are environed with trees which shelter them from the cold winds of winter and spring and in summer prevent that sudden and rapid evaporation which after heavy rains may generate disease. A most striking example of the

use of trees in preserving and promoting health occurred some years ago. As the story goes, a man, along the extremity of whose garden ran a ditch, received no injury from its proximity, till, in an unfortunate hour, a thick row of elders which grew upon the brink was cut down. Almost immediately low fever attacked the family, and not only reduced them to a state of great weakness, but returned at short intervals, till they removed to another locality.—*Brooklyn Eagle*.

THE CONCORD GRAPE.

The Man Who Developed it is Still Living.

The Concord grape is so common and popular that it will surprise most people to learn that it is of quite recent production and was developed by chance from a wild vine. Yet such is the fact, and the original vine is still in vigorous life. Mr. Ephraim W. Bull, who lives about a mile from Concord, Mass., on the road to Lexington, developed the luscious Concord from the seeds of a grape that was found growing wild in 1840 near the village. He was born in Boston in 1806, received a good education, and was working as a gold beater when disease of the lungs drove him to an open-air life. He became an enthusiast in grape culture, but could not make any of the sweeter varieties thrive in the cool climate of that section. Even the Long Island grape vines perished there. Only the little acid varieties were hardy enough. But when he tasted the fruit of this wild vine he found it, as he says, "foxy but sweet," and was convinced that it would do. In 1843 he planted a lot of the grapes without breaking the skin, the seedlings of which he cultivated for six years, and in 1848 picked from them a few bunches of the original Concord grape. Continued experiment and culture brought them to perfection, and now the fame of them has gone out into all the world. In France it is now recommended as the new variety which is to replace old and diseased vines. From the Concord Mr. Bull has developed other varieties, of which the best known are the Una and the Cottage.—*Brooklyn Citizen*.

Cut back all side branches to use, bud each and allow only two or three feet of clear trunk.

When grown on high, dry ground and partially sheltered, grapes will rot but little.

For The American Farmer.

THE PINES OF THE SOUTH.

By W. F. MASSEY, RALEIGH, N. C.

A few more notes in regard to pines may not be uninteresting to your readers even though "X" may know all about them, and think they are all found in Wilcomico county.

The great long leaf pine of the South, *Pinus Australis* is found mainly on the coast plain from Norfolk to Florida. It is not, as its synonym *Pinus Pauntris* would indicate, partial to low wet ground, but prefers the sandy uplands. A variety of this pine known as *Pinus Cubensis*, and sometimes as *Pinus Elliotii*, is found in wet lands immediately on the sea coast in North and South Carolina, Georgia and Florida. This pine is usually there associated with the pond pine, or *Pinus Serotina*, which is really a variety of the pitch pine, *Pinus Rigida*. The *Pinus Australis* and its variety *Cubensis* or *Elliotii* are the only ones from which turpentine is gathered. The Yellow pine, *Pinus Milis* is found in Maryland and over the South in general. The "Old Field" pine of Virginia and Maryland and the South generally is the Loblolly pine or *Pinus Tacda*. Its foliage is rather larger than that of *Pinus Milis* or Yellow Pine, which is the "heart" pine of the eastern shore counties. In the upper Piedmont country in Virginia near the Blue Ridge the Loblolly pine is scarce and *Pinus Milis* is there, the "Old Field pine." Associated with the Loblolly in Maryland and Virginia we find another pine, commonly called there "Spruce" pine, this has very short leaves, it is the Jersey Scrub or *Pinus Inops*. Another pine found on the Eastern Shore and all over Maryland and the Southern uplands is the Northern Pitch pine, *Pinus Rigida*, called in some places "Burr pine." In the mountainous region of the South from Maryland to Georgia the white pine, *Pinus Strubus*, is found and in the same region, but most abundantly in N. C., is found the Table Mountain pine, *Pinus Pemgeus*. The red pine, *Pinus Resinosa*, called also "Norway pine" is a northern sort, but is found sparingly in the mountains and upper Piedmont country. The long leaf pine and its variety furnish not only all the turpentine but the great bulk of the "yellow pine" lumber of the South. In the northern portions much lumber is also cut from *Pinus Milis* and the "old field"

pinus also furnish rough lumber for boxes &c. A variety of *Pinus Milis* in the coast country of S. C., is known as *Pinus Glabra*. The maritime variety of *Pinus Australis*, called *Pinus Cubensis* or *Elliotii* is perhaps the most lofty and stately of the Southern pines. This list includes all the true species found in the South and no report or other publication has ever said that all these are found in any one county in Maryland or elsewhere.

P. S.—*Pinus Clausa* is not a true species but merely a variety of *Pinus Inops*.

THINNING FRUIT.

A Missouri farmer says that he thinned the fruit on his trees at the rate of twelve trees in ten hours. They were large enough to yield an average of six bushels to a tree. He figures in this way: If he had a thousand trees it would cost him \$85 to have them thinned, with labor at \$1 per day, or \$170 at \$2 per day. He has but few culls among his apples, and the selected crop will easily bring him ten cents per bushel more than the fruit from trees which were not thinned out, at six bushels to the tree, would increase his sales to \$600.

Again he claims still another great advantage. It is not the growth of the fruit that exhausts the tree so much as the formation of the seed, and by reducing the number of seeds grown by picking off one-half or two-thirds of the fruit that sets, he relieves the tree so that it can form fruit buds in the fall for the next year's crop. In ten years he has not had a failure of the trees to bear every year, excepting when they were overloaded and he neglected the thinning. Then all the strength was used up in growing fruit, or rather seed, and there were no blossom buds formed.—*Mass. Ploughman*.

Bulletin No. 1 of the Division of Vegetable Pathology, U. S. Department of Agriculture, recently issued, contains a report upon the investigations and experiments made during the past three years with a view of obtaining evidence as to the contagious nature of peach yellows. Peach rosette, a blight prevalent in Georgia, is also discussed in the publication, being considered a disease distinct from peach yellows. Both diseases are regarded as contagious. The publication is fully illustrated.

MONEY IN ROSES.

"If you want to make money and at the same time enjoy your work," said a man, "raise roses. When I moved into the country I built a conservatory to grow roses, for I am very fond of them. From time to time I built additions to my hothouses, and in time found that I was raising more roses than I knew what to do with. So I began to sell them. I learned that there was a good winter demand for them; in fact, a very strong demand. I was able to command prices which seemed marvelous. Now I make large winter shipments regularly, and I have paid for my hothouses and all the labor expended on them many times over, and what I call my 'flower bank account' has reached a very respectable size."—*New York Witness*.

The effect of spraying apple trees with London purple to prevent ravages of the codling moth or apple worm is well illustrated by the experience of Mr. Lupton, of Virginia, as stated in a recent issue of Insect Life. The work of spraying was undertaken in Mr. Lupton's orchard, but was discontinued when less than one-third of the trees had been sprayed. From these trees 1,000 barrels of apples nearly free from worms were gathered, while from the remaining two-thirds of the orchard only 883 barrels of sound fruit were obtained, quite one-fifth of the apples from the unsprayed trees being wormy and unfit for use. Mr. Lupton estimates that his returns from the orchard would have been increased \$2,500, had all the trees been sprayed.

A blue rose is among the impossibilities. There is a law governing the coloring of flowers, which is simply this: The three colors, red, blue and yellow, never appear in the same species of flowers: any two may exist, but never the third. Thus we have the red and yellow roses, but no blue; red and blue verbenas, but no yellow; yellow and blue in the various members of the viola family (as pansies for instance,) but no red; red and yellow gladioli, but no blue, and so on.

Pear trees should not be forced to grow too rapidly; a slower growth is healthier.

In nearly all cases, the older the trees get the less adapted they are to being transplanted.

Live Stock.

ABOUT DRAFT AND COACH HORSES.

The farmers of the West at the present time have a golden opportunity to secure the most representative lot of pure-bred draft and coach horses ever before offered at reasonable prices. There has never been a time when the farmer could buy so advantageously for spot cash as now, and it is of course gratifying to note that Kansas farmers are sufficiently enterprising to take advantage of the situation, and consequently more sales are being made this season than ever before, and what is better, the stallions purchased are the very best the country affords. During the last three or four years, owing to the stringency of the times, only a limited number of imported and pure-bred stallions were bought, and fortunately for our farmers, a large number of breeders and importers accordingly neglected some of the Western States, notably Kansas and the Dakotas, therefore prudent farmers are now buying direct of the importers and breeders practically at their own prices.

Farmers have made serious mistakes in years past by breeding to inferior or cheap stallions, and the produce from such breeding has been time lost as well as unprofitable. They have noted that the horses which are always in good demand at remunerative figures were those sired by representative pure-bred stallions, which commanded a higher service fee than the cheap or grade stallion.

Another mistake of the past is the practice of a number of farmers who seem to have no definite idea as to the class of horses they desire to raise, flit from breed to breed, and one season breed to Clydesdales, then Percherons or coach horses. This process of live stock husbandry was never a success and generally unsatisfactory.

The horse-raiser should decide first just what class of horses he desires to raise, and then select his stallion and brood mares with reference to the breed that suits his fancy and requirements. Then stay with that class and develop and improve them to the fullest extent. The result of such a line of procedure will be both pleasant and profitable.

In selecting a stallion, first decide just what is wanted, and then take enough cash and sufficient time to get the desired

animal. Visit the best breeders and importers, not speculators, and you will readily secure what you wish and at a price that will well repay you for the time and expense expended in a judicious selection of a good sire.—*Kan. Farmer.*

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BEEF PROSPECTS.

The prospect for beef raisers have not been very encouraging this season, and many stock owners have been greatly demoralized with the condition of the markets. An important result of this has been a steady deterioration in the quality of the herds arriving in the markets. Where there is little encouragement to improve the stock it is only natural that the work should be neglected. It may be said truthfully that a large percentage of the herds arriving in the markets is almost typical scrub stock, or at least so far inferior to well-bred cattle that they cannot be classed as improved stock.

In spite of the gloomy prospects which some ranchers and breeders have depicted, well-bred and well-fattened cattle sell well. The exportations have been constantly increasing, and we have every indication that this trade will be enormously increased the coming winter, on account of the failure of the grain crops in Europe. The failure will affect the consumption of beef to a marked degree. It is noticeable in the pork trade at once, and there is no reason why heavier shipments of cattle should not follow. Heretofore Europe has not looked to America for beef for her laboring classes, who must live very cheaply, but she has come here to demand superior beef for the wealthier. Poor beef has never yet found a market in Europe. But some shippers are sanguine enough to think that in the present crisis in Europe that it will pay to ship quantities of scrub stock for the poorer classes. This can be sold in the foreign markets at very reduced rates, and it may be that good profits could be realized from such shipments. But the great danger is that ranchers, finding their scrub stock paying this year, will give up their system of improving the stock and expect as good returns another season from the poorer qualities of beef. It should be remembered that this is an exceptional year, and one must be careful in drawing deductions from it. Scrub stock-raising may pay occasionally, but as a rule it is a failure.—*American Cultivator.*

IMPORTANCE OF SALT FOR CATTLE.

The cattle of the Southwest often have very little attention. The condition of the cattle industry renders this inevitable, explains Ralph S. Tarr, of Texas, for the herds of various ranchmen mix together, and often march miles away from their proper range. Consequently, no one feels directly responsible for the welfare of the animals, and the owners do not know their condition except at the rounding-up season.

One of the effects of this system is that cattle often suffer for salt, and unless a person has seen how the animals crave salt he can have little idea how greatly they really need it. I have had one or two disagreeable experiences with cattle in need of salt. Once on returning to the wagon from a short absence I found several cattle tearing the wagon cover and eating a bag of flour, my only one, and at a distance of thirty-five miles from a store. Enough was scraped up for a few meals, but it taught a lesson, and after that everything which a steer would eat was placed well out of the way. At another time, having pitched camp, both my driver and I went out for game, and on returning in a short time we found a group of cattle about the wagon, one chewing a rein and another trying to destroy a collar, evidently for the salt coming from the perspiration, in the one case from the hand, in the other from the horse. Not long after a ham which we had hung on a bush near the tent was entirely destroyed by hungry cattle for salt. After that nothing but hardware was left outside of the tent.

That cattle need salt every farmer knows. But it is not always remembered how greatly they need it. Before the country was settled wild animals made long pilgrimages to salt licks, notwithstanding the danger. Predatory animals lurked about these places, and that many a creature died while there is testified to by the abundance of bones which are found near these salt deposits. Each one is a veritable animal graveyard, and its relics tell of the former existence on the continent of many animals which have vanished from the face of the earth. The call for salt which the system makes cannot be better testified to, than by this fact that the most timid animals went regularly to salt deposits where it was certain that dangerous enemies laid in wait for them.—*American Agriculturist.*

WISDOM OF ANIMALS.

Science is daily pushing back to show that intellect and ethics belong to the lowest forms of life. A careful observer of nature is astounded at the wisdom of insects and very low organisms. In South America tadpoles are carried overland on the back of the parent, attached by the mouth, to a new pond when the home pond dries up. Dr. Cope emphasizes the wisdom of birds in trying to lead dangerous characters away from their nests. What marvelous mechanical skill is shown by spiders! A raccoon is reported by Cope as having shown remarkable logical acumen. He was fastened by a chain in the stable. He tried to catch the chickens, but failed. But one day he spared a part of his dinner inside the stretch of his chain in a circle. He then pretended to go to sleep, but still spying carefully. The chickens, seeing him asleep and the food at hand, went within his fatal trap and were pounced on and caught. Owning on another occasion a rebus, a monkey of a low grade, the professor found him a continuous study for his displays of intelligence. His curiosity covered all things. His powers of observation were accurate. He used sticks and stones much as man does—reaching for things out of reach and striking with precision. Hitting the bald head of a friend was a peculiar source of pleasure. These notes are very voluminous nowadays, and I believe no one of average good sense any longer feels annoyed at being classified in the animal kingdom.—*St. Louis Globe-Democrat*.

CATTLE FEEDING.

What the practical farmer wants is the cheapest ration, which is also a good ration. The best way to get at this is generally to consider what is the cheapest food in the section in which we live each year and make that the basis. If wheat is very low, bran will probably be one of the cheapest substances we can use. Corn may be still cheaper. The usual fluctuations in the markets may drive us from one food to another, but it will pay to change if many head are to be fed through the winter. Wheat bran, clover hay and cut oats is one of the best combinations I have ever tried, and for a little increase of flesh production a small addition of linseed oil cake is very good.

Under ordinary circumstances I do not believe that cooked and steamed food is desirable, particularly from an economic point of view. Corn is more heating than wheat bran, but its excellence as a cattle food cannot be denied. For young animals it is best fed as meal; for older animals roughly crushed. The rationale of this is obvious. The smooth, flinty, outer coatings of the grain do not offer a ready access to the gastric juices and a large part of the grain passes out into the draught unaffected by the digestive processes. A great economy is, therefore, effected by feeding crushed corn. Of course in all cases the hay or straw should be fed with the grain. The digestive processes of all ruminants require an abundance of "roughness" for healthy action.

There is no room for dogmatism in the matter of foods. All sorts of grain, roots, forage plants, etc., have their claims, and it is largely a question of locality, and what can be cheaply and advantageously grown in any given place. I find no single thing more useful in feeding than sorghum. It has the greatest fattening qualities, is eaten greedily, increases to a marvelous degree the flow of milk, and from the end of August to the first of December it is one of my chief resources. What sorghum is to me, roots are in the farm economy of Canada. They cannot raise sorghum to advantage, they can raise roots. Each latitude must adopt itself to its climatic and other conditions.—*Southern Cultivator*.

A LANGUAGE FOR DOGS.

It must also be borne in mind that dogs are and always have been bred for special purposes, such as pointing, retrieving, running, watching and biting but not for general intelligence. Mr. Galton, who calls attention to this fact, suggests that it would be interesting as a psychological experiment to mate the cleverest dogs generation after generation, breeding and educating them solely for intellectual power and disregarding every other consideration.

In order to carry out this plan to perfection and to realize all the possibilities involved in such a comprehensive scheme, it would be necessary to devise some system of sign by which dogs would be able to communicate their ideas more fully and more clearly than

they can do at present, both to each other and to man. That the invention of such a language is not impossible is evident from what has been already achieved in the training of dogs for exhibition, as well as from the extent to which they have learned to understand human speech by mere association with man. Professor A. Graham Bell believes that they may be taught to pronounce words, and is now making scientific experiments in this direction. The same opinion was expressed two centuries ago by no less authority than Leibnitz, who adduces some startling facts in support of it. The value of such a language as a means of enlarging the animal's sphere of thought and power of conception, and of giving a higher development to its intellectual faculties, is incalculable.—*Popular Science Monthly*.

TO CATCH A RUNAWAY HORSE.

Most persons when trying to stop a runaway horse merely add to the panic which has caused the beast to take to his heels. Don't stand in the middle of the road and throw up your hand and shout. No one ever saw a real runaway stopped by such tactics. Don't stand on the side of the road and yell to the horse to stop. That will merely cause him to be worse frightened than before. As you see the horse coming, start to run as fast as you can in the same direction the horse is taking; when he catches up with you, and before he passes—horses don't go with the rapidity of a bullet from a gun even when running away—jump for his bridle rein, and hold to it, running along all the while as fast as possible. The check thus given by the pull on the bit will almost always stop a runaway. If on horseback you can do with ease, and with very little danger, for in this instance, your horse is running and you have all your strength to give to the runaway. The mounted policemen in Central Park, and on the roads about, catch runaway horses with much neatness and dexterity, and they have plenty of practice.—*Rider and Driver*.

See that the fall pigs are not deprived of their rights in life. Rather than sell them as "suckers" at starvation prices to the local butcher, give them the advantage of travel.

See our list of Rural Books on another page.

Dairy.

For the American Farmer.

CARE OF COWS.

During the nine months of gestation in cows they should have more than ordinary care. Proper management will oftentimes prevent abortion. The habit some get into of hastening cattle to and from the pasture or forcing them over one, two or perhaps three bar rails is very likely to bring about bad results. The milch cow should be handled quietly, giving her ample time to cross ditches or rough places—never should be made to run hard or traveled too long without water and rest. We often hear that "the cow lacks in udder what she has in neck, and that the larger the dew-lap the smaller the quantity of milk," and we fully believe in the observation, but we also believe and know that "good marks" have not all to do with making good returns in milk and butter. Good treatment which includes cleanliness, together with plenty of good food always pays and no one but a ninny will attempt to deny this fact. But many persons are careless about their cows—even in milking. They should be milked regularly and exactly clean every time, up to within about four or six weeks of calving. We all know that cows are very prone to lick themselves as this is their plan of freeing their hides from various incumbrances. Now in shedding season, they thus take into their stomachs much hair from their bodies, which may interfere with digestion for these hairs are never digested, but pass into the intestines, often forming into balls and clothing themselves with crustaceous matter which hardens as it accumulates. This will cause weakness, the food will not give proper nourishment, the cow becomes thin and of course her milk loses in richness as well as quantity.

Perhaps the best remedy for this evil would be to curry the cow, just as we do our horse, for certainly her merits entitle her to this attention. The use of the comb would allay the itching which induces the licking; it would draw off all loose hairs which discommode the skin and cause uneasiness; it would also prevent the lodgement of insects, that deposit larvæ in the hair—in fact no good reasons can be given why she should not be curried. The cow

soon becomes fond of this attention which is a very good proof of its utility.

THE RELATIVE VALUE TEST IN THE DAIRY.

In testing cows to determine their value for the dairy, the natural tendency is to give credit for immediate rather than average results. For example, we will say that Bess gives you a 7 per cent. milk and old Brindle a 4 per cent. product, it would be perfectly natural for many to jump at the conclusion that Bess was nearly twice as profitable a cow as the other. Yet such might not be the case, and for that reason we wish to caution those dairymen who are testing their cows for butter value against jumping at conclusions.

The only safe and accurate way is to arrange for a year's record of your herd, placing in a convenient place a scale and record tablet, weighing the milk for each cow and keeping her daily record separately. If on footing this up at the end of the year you found that Bess had yielded you 3,000 pounds of milk, and that her average test was 7 per cent., you would have, adding 15 per cent., 241 pounds as her yearly yield of finished butter. We will now foot up Brindle's record and see what she has done. Her milk yield we find approximates 6,000 pounds, her average test 4 per cent., we add gain in making, as before, 15 per cent., and we have 276 pounds of finished goods for her credit. Here is another chance to jump at conclusions that might be inaccurate.

What is their by-product worth? We credit Bess with 2,400 pounds of skim-milk at 20 cents per cwt., or \$4.80; the other comes in for a credit of 4,800 pounds that is worth \$9.60. We can now compute the yearly earnings of each. Making the average price received for butter 20 cents a pound, we have as the yearly income from Bess \$53. from Brindle \$64.80. If these cows consumed the same amount of feed we can now judge of their relative value, but any final calculation on the worth of a dairy cow as a producer that does not take into consideration the relative values of food consumed is incomplete and is a delusion and a snare.

We clip the above from the *American Creamery* and it contains two good points, showing clearly that the value of a cow depends upon the amount of butter fat she gives in a year and the amount of feed she eats, and the quantity of skimmilk, if butter is made. But

in testing cows we should not only test with a view to find out how much milk they give, and its richness, but also to see how much feed they can be induced to eat, and convert into milk. Some surprising results may be had in testing the capacity of cows as profitable feeders.—*Nat. Farmer*.

THE MILKING STOOL.

Now when he had milked the kine and his wife had strained the milk into pots made of clay.

He sat himself down and putting his hand into his pocket, hunted for a shekel.

And behold he findeth none.

And he said unto his wife: "Why is it that we have so few shekels? I work hard from early morn till dewy eve (in winter till frosted or frozen eve) but the shekels disappear as fast as I take them in and I can not get any to lay away for a rainy day."

Then his wife answered and said unto him: "I have been thinking much about these things lately and I am afraid we are not walking in the right dairy path, and one that leadeth to a pocketful of shekels. Why not take some good farm papers and read up on the business?"

And he taketh his wife's advice and subscribeth for several papers.

After a few months he beginneth to see where he had been making mistakes.

And he sayeth to his wife: "Let us hump ourselves, and do exactly as the papers teach." And they humped.

He selleth all of the kine that were poor milkers and investeth some of the shekels in a new dairy outfit, and had enough left to purchase several tons of good feed wherewith to feed the rest of the herd.

He resolveth to keep a winter dairy and breedeth his cows with that object in view.

He maketh granular butter and wrappeth it up in parchment paper.

He selleth his butter to persons living afar off in a large city, and he getteth twice as much for it as he used to get for his buttermilk-flavored butter.

He raiseth the heifer calves from his best kine that he breedeth to a bull whose name is recorded in a herd book.

He groweth crops for soiling when the drouth comes, and he talketh about building a silo.

His wife getteth the kinks out of her back while attending to the portable creamery.

His children become acquainted with store clothes and go to school, while his big dog churneth the butter.

He worketh not so many hours as heretofore but the work he now does tells.

When he now putteth his hand in his pocket it graspeth a lot of shekels.

He layeth by some shekels in a bank so that when he getteth old he will be provided for.

His wife employeth a hired girl and findeth time to grow some flowers.

He improveth the farm and keepeth the house painted.

Yea, verily, he becometh a model dairyman and so enlighteneth his neighbors that they begin to catch on and be in it.—*National Stockman.*

VALUF OF MILK.

We are beginning to learn some things of value in the dairy. The milk tester, for instance, is opening the eyes of dairymen to the vast difference existing in the milking qualities of cows of near kin in the best milk giving breeds. In the majority of herds may be found individuals that do not pay for their keeping, and yet their performance is sufficient to pass muster until subjected to an investigation by the tester or by an analysis.

The man who hid his talent in the ground lives yet. He is found stinting his cows of a handful of meal, when it would be returned to him many fold. He thinks pasture will keep them alive, and fears he will lose the little money spent in adding to the grass, perhaps scant enough, a few pounds of meal to increase the milk and butter. And now that the winter has come with its hardships, he dries his cows and loses the profit to be made by good feeding, rather than give the grain food that would make butter that sells at this season at the highest prices of the year. And in the spring the bony skeletons will stagger to the immature pasture to gnaw the last year's, and thus lose the cream of the summer's profit.—*A Pennsylvania Dairyman.*

Do you wash and salt your butter in the churn? The best butter is made with the least handling.

Get the ice-house ready, and fill it as soon as the ice is fit for cutting.

Apiary.

For the American Farmer.

CELLAR WINTERING.

BY GENIO, MARYLAND.

The intelligent bee-keeper* no longer dreads the cold of winter, for the so-called wintering problem is solved, by putting the bees before severe cold weather, into dry cellars or other suitable repositories. This should especially be done by bee-keepers in the Northern part of the United States and Canada.

Proper cellar wintering means an abundance of food, a dark, dry cellar, with a temperature of about 45°, and these conditions to be maintained until the warm weather of Spring. If the generally accepted statement is true, that it requires 25 or 30 pounds of honey to winter for a colony out-doors, and it takes from 10 to 15 pounds to winter in a cellar, there is a pretty fair profit on the side of cellar wintering, in the saving of honey alone. The saving of 10 pounds of honey per colony by cellar wintering where the apiarist has 100 colonies, means a saving of 1,000 pounds, which at the low price of 10 cents per pound, amounts to \$100, or \$1 per colony. To this amount is to be added the saving of colonies, which, if left on the summer stands, would have died of starvation, caused by the cold preventing the bees from reaching their stores. I have had colonies consume less than 4 pounds of stores while in the cellar. Comparatively few, intelligent bee-keepers now winter their bees on summer stands without some kind of protection; but no kind of protection, that is worthy of the name can be furnished as cheaply as the bees can be put in and out of the cellar or special repository; and those who winter without any kind of protection, do so at a greater expense than comes from any other method of wintering. Now is a good time to post up on bee literature during the long winter evenings. If you do take a bee periodical, subscribe at once for the and read the apicultural notes.

Preparations for next season's work should begin now. A great deal can be done during the winter toward fixing up sections, boxes, making hives and lots of other things that will have to be done before a crop of honey can be se-

cured. If you have not a house or work-shop to work in, you should have one. If you want to work bees just for fun and recreation, all right, go ahead. I work mine for the money there is in them.

WHY BEES DIE IN WINTER.

Bees die in winter because the conditions necessary for their health and comfort are not fulfilled. The main bee keepers agree as to what these conditions should be, but differ in their methods for securing them.

Every bee-keeper should know what these conditions are, and, after knowing other peoples' methods, select the ones that his judgment and experience of others would recommend, making such variations as would be wise.

These requisities are in brief, wholesome food, pure air, an even proper temperature, and quiet. The first of these mean good capped honey, and not less than 25 pounds, though if all the above conditions were fulfilled not near this amount would be needed.

Winter is the resting time for the bees, and if not disturbed or compelled to keep up bodily heat, but very little honey will be consumed.

Bees as well as men need pure air, but they do not need much of it. This is true of all insects, and especially when they are inactive. So while the hive must be ventilated, all draughts of air through it should be avoided.—*Indiana Farmer.*

AN IDEAL BEE FUNERAL.

An exchange gives a fanciful description of a bee funeral. Bees are not usually credited with sympathy or sentimentalism, but the writer of this item evidently thinks they should possess such traits if they do not. He says:

Two bees were observed to issue from a hive, bearing between them the body of a comrade, with which they flew for a distance of ten yards. Then, with great care, they put it down, and selected a convenient hole at the side of the gravel walk, to which they tenderly committed the body, head downwards, and then afterwards pushed against it two little stones, doubtless in memoriam. Their task being ended, they paused about a minute, perhaps to drop over the grave of their friend a sympathizing tear, and then they flew away.

If your hives or fixtures need painting, now is as good a time as any to do it.

Poultry Yard.

STORY OF SIX HENS.

The Experience of an Enterprising New England Woman.

Living in the city, yet longing for some of the country privileges, I determined to at least keep a few hens, so about the first of October, 1889, I bought six brown Leghorn hens. They cost me \$3.00, the expressage came to \$1.25 more, 100 feet of wire netting for a small yard cost \$1.00, and twenty-five cents was paid for boxes of which the house was made, so I began with an outlay of \$5.50. In our small back yard a hen-house was constructed of packing boxes. The front or the largest part was removed and old glass that we had on hand was substituted after the box had been raised on two light sticks so that the top sloped sufficiently to shed rain. Here the fowls took their dust and sun baths, and were fed on cold days. The next part, which was smaller, was a complete box, raised in the same manner as first part. The entrance from the other box was through a small hole cut in the side of the lower end. In this were two poles for roosts and the under part formed a shed. The smallest box was for the nest where my favorites deposited 246 eggs during the seventeen weeks of my ownership. The top board on this box could be raised and the eggs taken out. I sold ten dozen at thirty-three cents, besides using all we wanted in our family of two. Then, too, there was the satisfaction of knowing they were fresh, not limed as most eggs are that we find in market in winter. The food, corn, bran and cracked shells cost only \$2.00. Circumstances forbidding me to keep them longer I sold five at fifty cents each and cooked the sixth, so she was worth much or more than the average one sold. Setting aside the pleasures of the pursuit and satisfaction when using the products, and looking at the money view only, I cleared in the transaction \$2.25, considering the eggs and fowl used were worth market price. This for so short a time and with only six hens was an excellent return. When I gave up my fowls I had on hand a quantity of the feed I had bought, and had I kept them five weeks longer the percentage of profits would have been greatly increased. —*American Agricultural.*

THERE IS MONEY IN THE PULLETS.

I was forcibly impressed to-day by the fact that pullets are profitable stock to one just now; good pullets, I mean, those hatched in March and April and that are now laying eggs worth two and one-half cents apiece.

From one house, with 12 pullets in it, I got 7 eggs, while from two other houses each having 22 hens, 44 in all, I got just three eggs. As 7 is to 12 so isn't 3 to 44, and it set me to thinking whether, in the long run, it would not pay better to keep only pullets for winter layers, with enough one and two-year-olds to do the necessary incubating in the spring. It is always uncertain just at what time hens will finish their moulting, and until they do finish it there is not much chance of getting any eggs from them. My hens are of the hatch of 1890, and I thought they would be in full feather by this time and go to laying, but they moulted late (some of them are not near done yet) and having laid all last winter and laid well, and all through the summer, it is right that they should now take a rest. Eggs seem to be very scarce just now, and I don't know why it is so, for the fall has been a very good one and hens usually lay well at this season of the year. The pullets seem to be doing all the laying, and it would be wise to make preparations for the same condition of affairs next year by setting the hens early in the spring and hatching all the pullets that can be cared for.—*Alex. in National Stockman.*

EARLY CHICKS WITHOUT BROODERS.

Every one cannot have incubators, brooder houses, etc., but they can, during the summer and fall, provide a good warm house, say 12 by 24, with a southern exposure, put some windows in the south side, fill up inside with clay at least six inches above the ground and pack close, bank up the outside eight or ten inches, haul dust from the road and fill on top of the well packed clay floor at least three inches; on top of this throw a big wagon load of chaff or clover hulls. Get this all ready in the summer and early fall; this will make you a brooder house for early hatched chicks.

Provide a warm house for your fowls in winter. Keep either pure or a good strong cross of either Plymouth Rock or one of the Asiatic breeds, so as to have good winter layers. Hens that lay in the early winter will set by Christmas.

Set all the early clutches of eggs you can, and when the chicks are hatched turn them and the hen in the house above described and they will do well, providing the following rules are observed: For the first week or ten days keep the hen confined in a coop or box so the chicks can run about and hunt in the chaff when they wish; the hen will constantly cover them while kept in the coop if she is well fed. Feed the chicks just out of her reach at least five times per day (if trouble is taken to feed by lamp at 9 or 10 o'clock at night they will do much better) on corn cake, biscuit, oatmeal and table scraps and they will grow very fast.

After ten days old the hen can be allowed to run about the house with them during the middle part of the day. Water always with lukewarm water in cold weather and keep the coop clean and dry. Boiled vegetables chopped fine and mixed with meal will make the best of feed. After two weeks old, never feed any soft or sloppy food; fowls are constructed for eating dry food or seeds, not slops. As soon as they are old enough to hunt, throw wheat and broken corn among the chaff; it helps them to learn to hunt for it. With good care eight or ten broods can be kept in the house together, providing the hens are quiet and accustomed to each other. In this way early chicks can be grown with very little loss and with less expense than a brooder house. Cross hens must be confined or they will kill or hurt chicks not of their brood.—*Farm Journal.*

NO PERFECT BREEDS.

BY P. H. JACOBS.

There is no breed, however meritorious, that does not possess some defect, and the same rule applies to cattle, horses, sheep, swine, and poultry. If a thing is perfect it cannot be more so, and if a bird or animal is perfect in all the requirements there would be no necessity for more than one breed. The perfect breed of fowls, should such be originated, will leave no room for rivals, all others disappearing before it. The fact that there are many breeds, each having distinctive characteristics and merits, is conclusive evidence that we have not succeeded in blending them into a single class.

Perfection will not cease with the breed, for a breed is made up of a large number of individuals, each individual being a separate

creature from the others, and as it is known that nature does not create two things alike, even the leaves on a tree, and the blades of grass differing, the dissimilarity is still greater when comparisons are made with animals and birds. Any breeder can easily distinguish each animal in a herd, though they are of the same breed, or may be from the same sire and dam. Perfection, then, must combine more than is possible, as not only the breed must be perfected in every detail, but the individual characteristics of each member thereof must be brought to a uniformity of color, disposition, capacity, hardiness, and size that is beyond the efforts of the breeder to accomplish.

But breeds may be nearly perfect in certain respects. A breed cannot be perfect in even a single characteristic as long as improvement can be made. The hen that is induced to lay 180 eggs in one year only holds a record that may be surpassed at some future time by a competitor. She may be considered a perfect layer, but a decade may bring to the front a breed nearer perfection, each individual member of which being superior to the best of the present day. Perfection is something that is always to be attained, as there are no impossibilities in takings, and nothing perfect in the skill of man.

Our breeds of fowls are the results of skill and patience in breeding in order to render them as perfect as possible in certain respects. The Brahma has been bred for size and weight, and it has been so changed by domestication and selection that its wings are small and its comb reduced, the one to prevent it from flying and the other to protect it from the frost. Not being as active in foraging as the smaller breeds, it is more contented in confinement, and therefore is more capable of giving good results in the winter, hence it holds a high place as a winter layer if judiciously managed.

The active Leghorn, which is small and can fly over the highest fence, is one of the best fowls for egg production; but, in order to render it more useful, it should be allowed on a free range, as it does not endure confinement as well as the large Brahma, and when closely confined in yards, without the privilege of exercise, it becomes addicted to feather pulling, and fails to reward his owner as he anticipated. Here we have two breeds entirely dissimilar—the

Brahma and the Leghorn—the one being large, rather inactive, heavily feathered, with a small comb, and yet which is one of the favorite breeds, while the other is small, has a large comb, dislikes confinement, will not incubate unless very fat, and which lays perhaps more eggs than any other breed when it is kept to the best advantage suitable to the breed.

A breed may approach perfection in some localities and be lacking in others. The influence of the climate has much to do with the selection of a breed. With all the advantages in favor of a breed for prolificacy, hardiness is essential to success, as disease and loss may more than balance the gain in other directions. For cold climates a breed with a small comb will be more capable of enduring the winter, but in a warm section, where the birds can have greater privileges in the fields and are not exposed to severe cold but for a short period, the small, active breeds will no doubt give more satisfactory results.

The best breed is the one that you have tested and tried as the one most adapted to your section and for your purpose. There is no best breed otherwise. The best breed in New England may not be the best breed in Texas. Each individual farmer must solve for himself the problem of which is the best breed. And, to carry the selection further, he must decide which are the best hens of the best breed determined upon, for the individuality of the hens is the most important factor of the whole.

Each farmer or poultry man, however, should aim to reach perfection. He may never attain it, but he will secure something better from his efforts, as there is no limit to improvement. He should select the best males and the most prolific hens for breeding purposes. Any defects should be obliterated if possible, so as to have the flock better each year. If he has succeeded in greatly increasing egg production he should not destroy his flock by aiming to combine market quality with egg production. If market fowls are desired, breed for the quality sought in another flock. The best egg producers are not always the best market fowls. A breed has only one dominant talent, and seldom in more than a single characteristic. Have some object in view. If eggs are your object pay no attention to market quality. The egg producers and the choice table fowls differ as widely as the Jer-

seys and the Shorthorns among the cattle. The breeder of Shorthorns who would cross with a Jersey male would be put down on the list as inexperienced. The breeders of poultry have the same difficulties to encounter. A breed has its own peculiar merits and characteristics, excelling in those peculiarities only, and any attempt to combine the merits of all the breeds will only result in anarchy, and the time and labor so bestowed will be lost and wasted.—*Met. and Rural Home.*

POULTRY PICKINGS.

Thick milk is an excellent food for laying hens or for growing chicks.

Wheat can be fed to fowls at all seasons of the year to a good advantage.

When only the blood and feathers are removed the loss is only equal about one-fifteenth of the weight.

Brahmas lay unfat very readily and for this reason need more care in feeding than almost any other breed.

Well fattened and nicely dressed poultry always sells readily at fair prices. It is poor poultry that is often a drug.

Fowls two years old make the best breeders. This applies to nearly all kinds of poultry and in breeding to improve, this fact should be remembered.

By setting hens in "blocks of five," more or less, and doubling up the broods when hatched hens and labor are both economized. Washing spoils the new-laid egg.

Dissolve four ounces of beeswax in eight ounces of warm olive oil, in this put the tip of the finger and annoint the egg all around. The oil will immediately be absorbed by the shell and pores filled up with the wax. If kept in a cool place, the eggs after two years will be as good as if fresh laid.

If your hens are not laying well perhaps they are too fat. If you think this may be the trouble, cut off their corn entirely and feed them only oats. Not too much of that either, but make them "hustle" for a part of their food. Exercise will soon do away with the superabundant flesh.

There is no positive way to tell the age of fowls. An experienced person can judge something from the general appearance, but not always correctly.

Home Department.

MY IDEES OF MEN FOLKS.

BY PEGGY SHORT.

What do I know about men? Well, if I be an old maid, I guess I hain't been out sewing, twenty years, for nothing.

You mind Jane Dolittle, don't you? She that was Jane Barton? Well, as *men go*, Squire Dolittle is a goodish sort of one; but if she *don't* have a time with him, then my name ain't Peggy Short.

I was there, sewing, only last week. Well, just as she got right inter the middle of her Monday's cleaning, (and Jane is neat, she is, if she has got eleven children,) who should walk in, but the squire.

'What! moppin' agin?' said he, kinder stern like. 'I thought I had requested you not to do it any more till Spring.'

Jane sorter laughed, and said: 'Why, father, how we should look, with you and the boys coming in, forty times a day, and never scraping your feet.'

'Well, any how,' said he, 'I want you to stop, and mend my pants; I tore 'em awful bad, and I've got to go to caucus, this evening; if I don't they will put some *miserable fool* into office, just as they always do, when I stay away.'

'Well, said Jane, kinder sighing, 'if you'll keep the baby out of mischief I'll try!'

The squire played with the baby a few minits, then he took up a paper, and went to readin'. Pretty soon, something went *carwash*, and there was the baby, plump down in the mop-pail, jest his head and feet sticking out.

In the afternoon, when Jane had got her hands all inter the dough, the squire began to get ready to go to town.

'Jane,' said he, 'where is my shirt and necktie?'

'In the draw, where they've been kept for the last twenty years,' said she, kinder spunky like.

Pretty soon, he called out: 'Jane, I've turned every *last* thing in the draw over, and I *can't find 'em*.'

Well, she went, and washed her hands, and found 'em for him.

'Now for my coat and vest,' said he.

'Do look on your own nails, in the closet,' said she.

Pretty soon, he called from upstairs: 'Jane, I've found 'em; but all your dresses tumbled down, and I had to lay 'em on the bed.' Then

he came down, lookin' as cool and comfortable, as if he just come out of a banbox.

'Now, dear, I'm all ready,' he 'but my thick gloves; where are they?'

She was kneading away at her bread, so she said; 'on the upper shelf in the back closet.'

Up he went again, and in a minit, we heard the horridest crash. I thought, at first, it was an earthquake.

'Jane, Jane,' he called, 'what is in that blue box?'

'My best bonnet,' screamed she.

'Well, said he, 'I've turned a jar of preserves, or pickles, or some *pesky stuff*, inter it.'

The next morning, the squire got up, cross as two sticks. He told Jane he didn't see why she couldn't make such coffee as his mother used to; that the griddles were tough; and there was nothing on the table fit to eat.

Then he got up, and went to fidgeting about; said it was too dark there to see anything, and took Jane's nice, starched, muslin curtains, and touseled them up over the window cornice; pulled every last thing out of the paper-holder, and threw them on the floor, before he found what he wanted to read.

Then he seated himself in the easiest rocking-chair, with his feet on Jane's sewing-chair, that she had just covered with fine, log-cabin work. The day before, she had said that she would put on a tidy, only it looked so nice and bright, she hated ter. I looked at her, to see what she would do now; but she kept right on with her work, and didn't let on she see nothing.

I most wished, for a minit, she'd die, and he would marry me, so I could box his ears for him.

Just then, Sammie came in, and said, 'Father, did they put you up for any office, last night?'

'Hold your tongue,' said the squire.

'Well, why didn't they?' said Sammie.

The squire jumped right up, and caught him by the arm. 'Jane,' said he, 'I won't have any more sass from this boy of your'n; and he took him out to the barn.'

Pretty soon, Sammie came in, crying, and said, 'Father whipped me, and I hain't done anything.'

'Well,' said Jane, 'never mind, but when he comes in, tell him you are sorry.'

'Yes, marm,' said Sammie, brightening up amazing, all of a sudden.

That kinder beat me, I tell you, for the boy is spunky enough; but he waited, and as soon as his father

came in, he went right up to him, and said, 'I'm sorry you whipped me, father.'

Wa'nt Jane took a-back though?

Jane got up a splendid dinner, and after that the squire felt a little pleasanter, and condescended to enlighten us on the political questions of the day. Said he, 'I don't see why on airth our party will be such consarned fools, when there are good men, and smart ones, too, that would be glad of office; they go right on, and put them 'ar knaves and demigogs in, that will, I'm afraid, smash the country all to thunder!'

'Father, father,' said Jane, 'don't swear, and right afore the children, too!'

'Well,' said he, 'you are a good woman, mother, and I won't, any more; but it does kinder rile me up to have things go all wrong, as they did, last night, at caucus.'

But, girls, I wish you wouldn't pester me with questions, and git me a-talking. You know I never tell what goes on in families, where I sew, and I never will.—*Peter-son's Magazine*.

FROM BESSIE, MARYLAND.

This dear familiar friend is ushered in, decked in a new dress, "span clean," as the children say, and we give it a cheery welcome feeling it must have a bright and useful future. For such a good paper can do vast work changing the thoughts, brightening the ideas and brushing away the smoke-covered cobwebs which form in the minds of us over-worked house-keepers, which seem to be legion. But while we smile with pleasure over the improvements, a sadness runs through us at the thought of a decided change having been made, and a stranger hand is at the helm—for the well known one had done such faithful duty for so long a while, that he had grown to be familiar and seemed like a friend indeed. We are sorry to bid adieu to him in connection with this paper, but of course his work or time is otherwise needed, for he will not sit with folded arms there being such need in God's vineyard for busy faithful workers. Upon him we ask God's blessing now and forever.

Whilst persuing the interesting columns of the last issue, I felt as if our little nothings would not be needed now, and even if they were accepted, we would not feel quite as much at home, as we use to in the club, however, I shall try to to hold up my head and seem brave and if I find my thumbs twirling

around each other, I'll stick them under my apron, out of sight.

Sisters, this is the time to feed your hens for eggs, not for flesh remember. Have all the bones left from dining-room and kitchen beat fine on a large rock, and then watch how eagerly the hens devour them. Cut fine raw turnips once or twice a week and scatter in the poultry yard—use the speckled apples the same way. Boil corn in pot liquor occasionally and do not forget to use red pepper during the cold weather. Now I hear some one say, "Oh, that is so much trouble." Well, it is trouble I admit, but to succeed in anything, we must work and often deny ourselves social pleasures. One of our ladies raised one hundred and two turkeys, and when queried as to how she did it, she replied, "I stayed home and attended to them."

Now she is reaping her reward for arduous duties. Do not neglect the hen roosts, but use kerosene oil lavishly and frequently that way the parasites which are so destructive, can be kept down.

Will Mr. Editor be kind enough to give a good recipe for durable wash resembling paint, color stone or drab, also tell how to mix cheap red paint for roofs.

How could a recess window in a plain Chapel be beautified? Would naphtha give it a pleasant light?

Hoping to see something from our old members soon and to hear of their using their pens for THE AMERICAN FARMER. I close by wishing one and all a Happy New Year.

For the American Farmer.

HOW WE LIVE.

BY N., MARYLAND.

Works on Physiology are numerous, now that it has been introduced into the common schools. Huxley, the distinguished English scientist, estimates that a man of 154 lbs. weight would lose 14,500 grains every 24 hours exclusive of water, or 2 1-5 lbs. nearly, which would be distributed as follows: Carbon, 4.7 lbs.; nitrogen, 6.140 lbs.; mineral matter, 8.140 lbs., which could be replaced by lean beefsteaks, 5.7 lbs.; bread, 6.7 lbs.; milk, 1 lb.; potatoes, 3.7 lbs.; butter dripping, etc., 6.70 lbs.; water, 3 19.70 lbs.; 28.35 grains, 1 ounce,—a total of a fraction of over 2 lbs. of solids exclusive of water.

Among the strange things brought out in recent investigations as to foods required to build up and maintain human strength, there is none more striking than

the deviations of actual life from what physiologists have made the standard.

Thus a German woman at moderate labor would use 92 grains protein, 41 fat and 400 of carbohydrates, while an American with light exercise would consume 80 grains protein, 80 grains of fat and 300 grains of carbohydrates.

Nor is the difference less striking with those at "hard labor." Voit, and others, estimate a German thus employed would consume 145 grains protein, 100 grains fat and 450 grains carbohydrates. Playfair puts that of an Englishman, similarly employed, at 185 grs. protein, 71 grs. fat and 568 grs. carbohydrates, while Atwater makes an American consume 150 grs. protein, 150 grs. fat, and 500 grs. carbohydrates. A machinist in Boston would get away with 182 grs. protein, 254 grs. fat and 617 grs. carbohydrates, but one in Connecticut would consume 105 grs. protein, 147 grs. fat and 399 grs. of carbohydrates. A teamster of Massachusetts would eat 254 grs. protein, 363 grs. fat and 826 grains carbohydrates. The army ration of the United States is 120 grs. protein, 161 grs. fat, and 454 grs. carbohydrates, while a brickmaker of Massachusetts would eat 180 grs. protein, 365 grs. fat and 1,150 grs. of carbohydrates.

A college base ball team consumed 181 grs. protein, 292 of fat and 557 grs. of carbohydrates, and yet there are others that take as much exercise all around as they did.

A well-to-do-family consumed 128 grs. protein, 177 grs. fat and 466 grs. carbohydrates.

These figures, which we copy from the November number of the *Experiment Station Record*, are significant in various particulars. In the light of wages and their relation to a tariff, they show two things—either that our wage-earners are overfed, or that our climate demands more food than Europeans. They explain too, why our women incline more to embonpoint than Germans, or English ones.

The physiologists state that foods digest in from 3 to 5 hours, and Prof. Martin, of Johns Hopkins, states in his "Human Body" that it takes from 2 1/2 to 3 hours to empty the stomach of food taken; that it should not be bolted, but eaten slowly, so that the different digestive juices might have their proper effects; hence it is very easy to see how hours of labor might exercise an important influence on it. And this, especially where the usually

breathed atmosphere might have an important bearing upon its proper performance. These figures are suggestive in another way, that the drier climate of this country, with its greater rapidity of evaporation, demands more food than more moist ones, or a greater use of woollen underclothing to prevent it, as Prof. David A. Wells' late article has but too well shown.

Good food in sufficient time to masticate and partially digest before going to work promises best for perfect health. Fortunately, the slow-eating habits of animals renders this easy in the country, from which cities, towns and villages draw their best recruits, both of mind and body.

DANGERS OF THE BABY CARRIAGES.

Many diseases of the spine and "brain trouble," from which our babies die, could be traced to a fall from the carriage, if poor baby could tell; but there lies the security of the average nurse; I do not mean to condemn carriages, because they are a great help to mothers and benefit to babies; but I would call attention to the fact that the baby is often not securely fastened in. The strip is left unbuckled, and in crossing streets the child is in constant danger of being thrown out. I saw one little child fall from this cause. He was picked up senseless, carried into a drug store and restored to consciousness, and the nurse went on her way rejoicing, and probably the mother never heard of it.

A little girl climbed up on the seat and reached for the handle while the nurse had left her "a minute;" the carriage was overturned and the child received an ugly cut on the forehead, which will disfigure her for life. I have noticed lately on a number of carriages an improved strap, which is a step in the right direction.—*Ladies' Home Journal*.

The largest apartment house in the world is located in a suburb of Vienna. It contains between 1,200 and 1,500 persons, divided into upward of 400 suites of from four to six rooms each. They are now occupied by over 2,000 people.

OUR CORRESPONDENTS.

We propose to give space on this page to our correspondents and in order that all may have the opportunity of being heard, we must request writers to express themselves in short and pithy missives. We offer all a chance and will heed all reputable communications.

WHEN THE CHICKENS COME HOME.

You may take the world as it comes and goes,
And you will be sure to find
That fate will square the account she owes,
Whoever comes out behind;
And all things bad that man has done,
By whatsoever induced,
Return at last to him, one by one,
As the chickens come home to roost.

You may scrape and toil and pinch and save,
While your hoarded wealth expands,
Till the cold, dark shadow of the grave
Is nearing your life's last sands;
You will have your balance struck some night
And you'll find your hoard reduced,
You'll view your life in another light,
When the chickens come home to roost.

You can stint your soul and starve your heart
With the husks of a barren creed,
But Christ will know if you play a part,
Will know in your hour of need;
And then as you wait for death to come
What hope can there be deduced
From a creed alone? you will lie there dumb
While your chickens come home to roost.

Sow as you will, there's time to reap,
For the good and bad as well,
And conscience, whether we wake or sleep
In either a heaven or hell.
And every wrong will find its place,
And every passion loosed,
Drifts back and meets you face to face—
When the chickens come home to roost.

Whether you're over or under the sod
The result will be the same,
You cannot escape the hand of God,
You must bear your sin or shame.
No matter what's carved on a marble slab,
When the items are all produced
You'll find that St. Peter was keeping "tab,"
And that chickens come home to roost.

—Inter. Conn.

HOUSEHOLD HINTS.

Burnt alum is the best cure for proud flesh in "man or beast."

A most excellent cement for fastening leather, paper or wood to metal can be made by adding a teaspoonful of glycerine to a gill of glue.

Remove ink stains from silver-plated ware by rubbing them with a paste composed of chloride of lime and water; then wash and wipe dry.

White spots on varnished furniture will disappear if you hold a hot plate from the stove over them, or rub them with essence of peppermint or spirits of camphor.

A solution called diamond ink has been invented which enables one to write upon glass. It is necessary to allow it to remain upon the glass about fifteen minutes before wiping off.

Furniture polish may be made by taking one and a half ounces of alcohol and butter of antimony, one-half ounce of muriatic acid, eight ounces linseed oil, one-half pint of vinegar; mix cold. This will be found good.

Where the sunshine does not enter the doctor must.

For simple hoarseness take a fresh egg, beat it and thicken with pulverized sugar. Eat freely of it.

To brighten carpets wipe them with warm water in which has been poured a few drops of ammonia.

A paste of whiting and benzine will remove spots from marble.

For poison oak bathe in cream and gunpowder twice a day till cured.

Silver can be kept bright for months by being placed in airtight case with a good sized piece of camphor.

Remove oil spots from marble by covering them with a cream of calcined magnesia and benzine, and brushing off the former after the dissipation of the latter.

For coffee stains try putting thick glycerine on the wrong side and washing it out with luke-warm water. For raspberry stains weak ammonia and water is the best.

In the new Parisian fashion stockings are made with separate compartments for each toe. This is said to be a sure cure for corns, which are caused by the rubbing of the skin against that of the neighboring toes.

One teaspoonful of ammonia to a teacupful of water will clean gold or silver jewelry; a few drops of clear aqua ammonia poured on the under side of diamonds will clean them immediately, making them very brilliant.

Boiled Backbone—Put in a pot of water and boil one hour. Peel some turnips. Slice and throw in, cook until done. Take the meat and turnips up, thicken the gravy and pour over.

Macaroni Soup—Break an ounce of macaroni into pieces, put in a stew pan and cover with one quart of boiling water. Let it boil for twenty minutes, drain and put with a quart of stock in a soup kettle. Season with salt and pepper and serve with a plate of chesse.

Sally-Lunn—Mix a quart of flour with a teaspoonful of sugar, in which rub a tablespoonful of butter and an Irish potato, mashed fine; add half a teacup of yeast and three well-beaten eggs, with warm water to make a soft dough. Knead half an hour. Let rise, handle lightly, put in a cake mould and bake in a hot oven.

Small potatoes are very nice cooked in this way: Peel them and boil in salted water; do not let them boil until they are soft. Beat one egg, and have ready some fine cracker crumbs; roll the potato in the egg, and then in the cracker and fry in butter until a light

brown, turning frequently, that the color may be uniform; or the potatoes may be dropped into hot lard. In this case, a cloth should be laid over a plate and the potatoes should be drained for a moment in this before sending them to the table.

Salt pork may be boiled or fried in the same manner as bacon, and by many is considered more wholesome. Cut the pork in slices; parboil in boiling water; broil or fry and serve with slices of lemon.

COST OF RAISING A BOY.

A careful investigator of the subject has figured out the following interesting "expense account," which is declared to be "below the actual figures, if anything." "The cost of raising an ordinary boy for the first twenty years of his life is here given: Per year for the first five years, all expenses, \$100, or \$500 in all; \$150 per year for the next five years; \$200 per year for the third five; \$300 per year for the next three years and \$500 for the next two, or a total of \$4,150 outlay by the time the boy is of age and able to hustle for himself." We hope the Bee subscribers will remember that the editor has taken a contract to raise two boys, and by promptly renewing their subscriptions they will greatly help us out in raising the fund of \$8,300 which has got to be expended in behalf of those two boys before our responsibilities cease. A hint to the wise is sufficient.—*Ripley Bee*.

OYSTERS A LA POULETTE.

Parboil one quart oysters, skim and strain; melt two tablespoonfuls butter, add two scant tablespoonfuls flour, pour on slowly the oyster liquor; add one pint cream; season with salt, pepper and the juice of one lemon; add three eggs well beaten; cook until it has thickened; put the oysters on a dish, cover with the sauce and sprinkle with chopped parsley; garnish with toast points.

In adding the eggs to the rest of the mixture pour the latter over the eggs, stirring fast, then pour all back in double boiler and cook until thick—just as in making soft custard. Add the lemon juice to the sauce, at the last moment, just before pouring over the oysters, else it may curdle the whole.

It requires much care to prepare this dish, and it must not stand but be served the moment it is done.

These are delicious.

OUR TELL YOU.

Stand erect.
Up and hustle.
Be thoughtful, earnest.
Seek not to be opulent.
Cause no one to shun you
Reveal your secrets to no one.
Insure your life for eternity.
Buy only what you need.
Envy no man's possessions.
Fulfill all your engagements.
Overlook your brother's faults.
Rebuke sin with firmness.
Teach by example, by precept also.
Hasten to be wise, for life is short.
Earnestly strive to obtain knowledge.
Always shun the truth.
Make no hasty promises.
Earn what you consume.
Return not evil for evil,
Incline your heart unto wisdom.
Correct your own faults at once.
Act up to your professions always.
Never lend your ear to flattery.
Free your mind and heart from vanity.
Assert nothing that you cannot prove.
Read men's characters by their actions.
Manage your business methodically.
Endeavor at all times to do your duty.
Rally to the support of "THE AMERICAN FARMER."

—O—

FROM JENNIE.

"A stranger," wrecked and as one without hope, sends you all a tender greeting. When "A Word of Sympathy" from "Ceres" was read to her, tears filled her eyes; it made her happy to feel that she was not a stranger to one at least. She has always desired to reach all hearts, and though very feeble, is with all in spirit. It is nine weeks since without warning she was stricken down with fever caused by the accumulated filth of a neighbor.

There was no escape, though she had tried to protect herself by right ways of living. So great was the poison, nothing but poison would antidote it, and to this child of nature all drugs were foreign, and left her wrecked. It is more than sad that she should so suffer, since for all right ways of loving, and all sanitary conditions she has so long and earnestly labored. This hill, often called Mt. Salubrity is a lovely place, the climate is dry, and suitable for invalids. There are sanitary laws in the code, but they are not enforced, as no provision was made by council for removal of filth. In most cases the care of premises is left servants, who seem careless, and their employers must surely be ignorant of true sanitary laws. We have long had the name of having the cleanest place on the hill. It has become a personality with us, tho' at first it surprised, and even offended us.

"Try Again" would not be surprised if she could look in on the

lot next us, that a stranger had so often written on sanitary subjects. Her greatest surprise would be, that on this lovely hill, in the midst of civilization, there would be so much filth. No kindness, no example, no persuasion has reached these people; they are even antagonistic when appealed to, and are not willing to spare a kind neighbor from future suffering.

We can only pray the Master to touch their hearts, as we pray Him to touch our beloved mother with a gracious hand of healing, that she may rise to new life and usefulness. It would be well for all to know, that refuse of all kinds, covers a lurking demon that may, as a thief in the night attack even the strongest. Filthy stables, decaying timber, piles, dish water, slops of all kind thrown carelessly out, decaying vegetables, trash thrown in the street, and yards are but a cipher of what we have to contend with, and which has brought so much sorrow and suffering. Your love, sympathy and prayers are most welcome to herself and daughter.

—O—

WHAT KEEPS WOMEN YOUNG.

A woman is happy just in proportion as she is content. The sun has a way of changing the spots upon which it shines. Especially is this true of our land, where one is up to-day and down to-morrow, and *vice versa*. The wisest woman is she who trusts in a to-morrow, but never looks for it. To sit down and wish that this might be, that that would be different, does a woman no good. It does her harm in that it makes her dissatisfied with herself, unpleasant to her friends, and makes her old before her time. Happiness is not always in porportion to enlarged success. This may sound like an old saw, and I think it is, but there is a world of wisdom in many an old proverb just the same. Contentment is a wonderful thing to cultivate. There would be fewer premature-old women in the world if it was given more of a trial, and it became a more universal quality in womanhood.

—O—

"BESSIE" asks for "durable wash resembling paint, drab or stone color." We give the following, which can be relied on: Take 1lb. burnt umber, 1lb venetian red, dissolve them in vinegar, pour this into a bucket of common lime white-wash, stir well; then dip a piece of paper into this mixture, dry it too see the shade desired,

if too light add a little more of umber and venetian red; if too dark add more of the white-wash. This is for drab.

FOR STONE COLOR, dissolve lamp-black in soft soap, then add white-wash to give the shade desired. Now to fasten it well to wood, brick or stone, dissolve 1lb. of sulphate of zinc in water and add this to about six gallons of the mixture. If you wish to white-wash inside walls, add this zinc solution, 'twill prevent rubbing off.

"BESSIE" also asks for "cheap red paint for roofs." Take 3lb venetian red, 1lb. red-lead about 1 quart boiled linseed oil, more or less to make the consistency required. This is the best cheap paint known and will give satisfaction.

"BESSIE" must excuse us for the present on "recess window beautifier." In regard to naphtha, we know it gives a pleasant light, but rather think it dangerous.—[ED.]

—O—

A TIME-TABLE FOR HOUSE KEEPERS.

The following time-table, according the New York World, should prove of use to the young house-keepers:

For bread, large loaves, an hour; small loaves, from half to three-quarters of an hour.

Biscuits and rolls, from fifteen to twenty minutes.

Brown bread, steamed three hours.

Loaves of sponge cake, from thirty to forty minutes, according to size.

Loaves of rich cake, an hour or less.

Fruit cake, about two hours, if in large loaves.

Small, thin cakes and cookies, from five to ten minutes.

Rice pudding, three hours in slow oven.

Boiled pudding, three hours.

Batter puddings, baked, forty-five minutes.

Pie-crust, about half an hour.

—O—

CIDER VINEGAR.

Apples that do not keep well in winter should be converted into cider, and then into vinegar. Some varieties of apples will not keep over the winter under any system of storage, and unless a market can be found for them at the time they are harvested they will be a loss. Good cider vinegar, however, is always in demand, and it will keep until a favorable time for selling arrives.

Miscellaneous.

THE RAILROAD THROUGH THE FARM.

BY SAM WALTER FOSS.

There's thet black abomernation thet big locomotive there
Its smoke-tail like a pirut flag, awavin' through the air;
An' I mus' set, twelve times a day, an' never raise my arm
An' see thet gret, black monster go a-snort-in' through my farm.
My father's farm, my grandsir's farm—I come of Pilgrim stock—
My great-great-great great grandsir's farm, way back to Plymouth Rock;
Way back in the sixteen hundreds it wuz in our family name,
An' no man dared to trespass till that toot-in' railroad came.
I sez, "You can't go through this farm, you hear it flat an' plain!"
An' then they blabbed about the right of "eminunt domain."
"Who's Eminunt Domain?" sez I, "I want you folks to see
Thet on this farm there ain't no man, so eminent ez me."
An' w'en their gangs begun to dig I went out with a gun
An' they rushed me off to prison till their wretched work wuz done,
"If I can't purtect my farm," sez I, "W'y then it's my idee
You'd better shet off callin' this 'the country of the free.'"
There, there, ye hear it toot again an' break the peaceful calm,
I tell ye, you black monster, you've no business on my farm!
An' men ride by in stove-pipe hats, an' women toll in silk,
An' lookin' in my barn-yard say, "See thet ol' codger milk."
Git off my farm, you stuck up doods, who set in there an' grin,
I own this farm, railroad an' all, an' I will fence it in!
Ding-ding, toot-toot, you black ol' fiend, you'll find w'en you come back,
An' ol' rail fence, without no bars, built straight across the track.
An' then you stuck-up doods inside, you Pullman upper crust,
Will know this codger'll hold his farm an' let the railroad bust.
You'll find this railroad all fenced in—'twon't do no good to talk—
If you want to git to Boston, w'y jest take yer laigs an' walk.

—Yankee Blade.

A little innocent misunderstanding is sometimes very useful in helping one over a hard place.

"Mabel," said the teacher, "you may spell 'kitten.'"

"K-double-i-ten," said Mabel.

"Kitten has two eyes then, has it?"

"Yes, ma'am—our kitten has."

Supply your homes with good books and innocent games for these long evenings.

MARY AND HER LITTLE HAT.

Mary had a little hat,
Its crown was very low,
And everywhere that Mary went
That hat was sure to go.
She wore it to the play one night,
And furnished fun for all;
For how those girls did laugh and shout
To see a hat so small.

—Cloak Review.

BECOMING A STRONG WRITER.

Uncle Stephen, an old negro, had come to cut the grass in the front yard, and as Colonel Winter started out to his office he stopped to greet the old man.

"Well, Stephen," said the Colonel, "I hear that you intend to give your son an education."

"Dat's what I does, sah. I knows what 'tis ter struggle along widout larnin', an' I is 'terminated dat my son shan't trabble bar'foot ober de same hard road dat I did."

"A noble resolution, Stephen. I wish all fathers felt so. Is your boy learning rapidly?"

"Ez fast ez er hoss can trot, sah. Why, last week he wrote a letter to his aunt dat libs mo' dan twenty miles from yere, and after awhile he gwine ter write ter his udder aunt dat libs fifty miles away."

"Why doesn't he write to her now?"

"Oh, he kain't write so fur yit."

A GOLD MINE IN THE TEETH.

French statisticians have recently made some curious calculations of the amount of gold which is annually buried in the United States. M. Victor Meunier asserts, after making careful inquiries, that the American dentists annually insert into the teeth of their patients 1,800 pounds of the precious metal, which would be worth \$450,000. This gold is never recovered, of course, but is buried with the person in whose mouth it is placed. Making allowance for the rapid increase of our population and for the continued deterioration of the human teeth, it appears that in less than a hundred years American cemeteries will contain more gold than now exists in France. This is no fancy sketch, but the result of study and cold figuring.—*St. Louis Republic*.

Plant good seed in your ground and good thoughts in the minds of your children.

The Lord will not do for a man what He has given him power to do for himself.

"THE EQUINOMICAL COUNSEL."

Written especially for *Our Country Home*, by "Josiah Allen's Wife," begins in the February issue. Three issues of *Our Country Home* FREE to readers of this paper who will send 6 cts. for postage and mailing. Address the publishers, at 81 Warren St., New York.

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RAISED IN THE BEST LAND IN THE WORLD.

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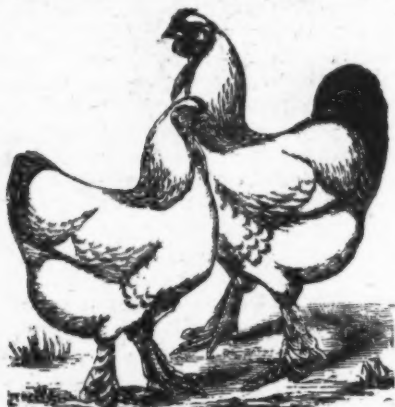
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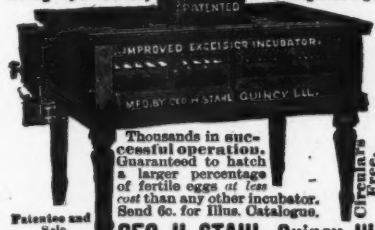
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